

1 IN THE CIRCUIT COURT OF THE
2 11TH JUDICIAL CIRCUIT, IN AND
3 FOR DADE COUNTY, FLORIDA

4 GENERAL JURISDICTION DIVISION

5 CASE NO.: 94-08273 CA (20)

6 HOWARD A. ENGLE, M.D., et al.,

7 Plaintiffs,

8 V.

9 RJ REYNOLDS TOBACCO COMPANY,
10 et al.,

11 Defendants.
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12
13 66 West Flagler Street
14 Miami, Florida
15 Tuesday, August 12, 1997
16 12:25 p.m. - 4:00 p.m.

17 DEPOSITION OF RONALD LUKAS

18 Taken before Donna Gunion, Notary
19 Public for the State of Florida at Large,
20 pursuant to Notice of Taking Deposition filed in
21 the above cause.
22
23
24
25

KLEIN-BURY & ASSOCIATES

APPEARANCES

STANLEY M. ROSENBLATT, P.A.,
By: JOHN HOAG, ESQ.,
Attorneys for Plaintiffs.

BRYAN CAVE, LLP,
By: ROBERT SHELY, ESQ.,
and
RODNEY OTT, ESQ.,
Attorneys for Defendants.
(Via telephone).

I N D E X

EXHIBITS

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1 Thereupon:

2 RONALD LUKAS

3 was called as a witness by the plaintiffs, and
4 having been first duly sworn by Kathy Stine,
5 Notary Public, was examined and testified as
6 follows:

7 DIRECT EXAMINATION

8 BY MR. HOAG:

9 Q. Can you state your name for the
10 record, please?

11 MR. SHELY: Yes, this is Robert W.
12 Shely. I'm an attorney at the law firm of
13 Bryan Cave in Phoenix, Arizona, and I
14 represent CTR.

15 I have with me my colleague, Rodney
16 Ott, O-t-t, who is also an attorney at
17 Bryan Cave in Phoenix.

18 MR. HOAG: And, of course, I'm John
19 Hoag. I represent the law firm of Stanley
20 Rosenblatt, Professional Association.

21 We are here on a case involving Howard
22 Engle who is a member of a class who's the
23 named class representative in the lawsuit
24 which is filed in Miami, Florida, and the
25 lawsuit is involving all of the major

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1 tobacco companies.

2 BY MR. HOAG:

3 Q. Now, before we make any other
4 announcements on the record, I just want to get
5 the name of the witness on the record so, Mr.
6 Lukas, could you just, for the record, state
7 your name?

8 A. My name is Ronald Lukas, L-u-k-a-s.

9 Q. And you have a Ph.D., is that correct?

10 A. That's correct.

11 Q. So before I start asking you any
12 additional questions, Doctor Lukas, when we were
13 off the record we were briefly discussing the
14 nature of this deposition.

15 The deposition is being taken in
16 Phoenix by myself and I'm in Miami, so it's
17 being taken over the telephone. You're in
18 Phoenix, Arizona along with the two attorneys
19 who have already named themselves and the court
20 reporter and myself are here in Miami, Florida.

21 You have been sworn in by a person
22 who's been notarized to swear people in, I
23 suppose, in the State of Arizona, is that
24 correct?

25 MR. SHELLEY: Well, he doesn't have any

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1 basis for knowing that she's a notary
2 public in the State of Arizona.

3 MR. HOAG: Who can take sworn
4 statements from people in Arizona, is that
5 right?

6 MR. SHELY: I don't know what the
7 rules are in Arizona about that. I just
8 know she's a notary public.

9 MR. HOAG: And it was your request as
10 the attorney representing CTR, that someone
11 there swear the witness in and you -- this
12 person works in your office and is a
13 secretary in your office that has
14 identified the witness who has been sworn
15 in, correct?

16 MR. SHELY: Yes. I don't know that it
17 was my request, but I just think it makes
18 sense to have somebody physically on site
19 and, I don't know, because I've not been
20 involved in your series of depositions, I
21 don't know what your standard procedure
22 is.

23 So, what I have suggested doing is
24 having a notary public here swear him in
25 which has occurred on the record and then

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1 I'll take this chance to note my objection
2 to the absence of a court reporter on site
3 and I don't know exactly what the
4 ramifications of that are. I just want to
5 preserve objections for the future to the
6 extent that the procedure here is somewhat
7 irregular and I'm going to allow you to
8 take the deposition, but I just want to
9 preserve the objection on the record.

10 MR. HOAG: What's your name again?
11 Which attorney are you?

12 MR. SHELY: I'm Robert Shely. I'll be
13 counsel of record. Bob. I don't go by
14 Robert.

15 MR. HOAG: Okay, Bob.

16 And also for the record, this is a
17 method of taking depositions that we have
18 done commonly in both the Broin and the
19 Engle case. And for the vast majority of
20 the times we've taken the telephone
21 depositions, the court reporter has been
22 present in Miami.

23 I don't think anyone else has
24 previously objected to it, but I understand
25 you want to preserve any possible

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1 objections for whatever reason, so you've
2 done that on the record now.

3 Obviously also you can, if you want
4 to, have a court reporter there also. I
5 don't know if that's ever been done, if you
6 have any concern about the court reporter's
7 ability to transcribe this statement and,
8 of course, the court reporter will provide,
9 if you request it, a copy to you as quickly
10 as she can possibly get it to you, if you
11 want to expedite it, and the witness will
12 have an opportunity to read it, if that's
13 what you choose to have the witness do.

14 MR. SHELY: Right. I don't know --
15 one clarification -- I don't know as a
16 practical matter that I could get a court
17 reporter here, but at this time we
18 understood the court reporter was going to
19 be here but the only point I want to make
20 is I think we've, you know, collectively
21 made the record and I don't have anything
22 further to say about it.

23 BY MR. HOAG:

24 Q. Doctor Lukas, have you ever been
25 deposed before?

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1 A. No, I haven't.

2 Q. And, again, because this is a
3 telephone deposition, there may be some
4 occasions when either you don't hear me clearly
5 or I don't hear you clearly or the court
6 reporter doesn't hear either one of us clearly.
7 If that happens, I will tell you if I don't
8 understand. The court reporter will tell both
9 of us if she doesn't understand and I would like
10 you to tell us if there's anything that you
11 don't hear that's not clear to you for any
12 reason over the telephone, okay?

13 A. That's certainly fine with me.

14 Q. And when I ask you questions, if you
15 could always answer with words rather than nods
16 of the head for obvious reasons for a telephone
17 deposition, although we say this for any kind of
18 deposition.

19 So if you can make sure you give
20 verbal responses, I would appreciate that. Is
21 that okay?

22 A. I understand.

23 Q. If you need to take a break at any
24 time, just let me know. We'll stop. We'll take
25 a break whenever you feel you need one.

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1 A. Okay. That's fine.

2 MR. SHELY: John, one quick question,
3 not limiting you in any regard, just trying
4 to get logistics here, how long do you
5 suspect it will go?

6 MR. HOAG: My estimate now is two and
7 a half, three hours.

8 MR. SHELY: Okay, that's fine. I just
9 wondered if we were going to get into
10 lunchtime, we would make arrangements for
11 that.

12 MR. HOAG: Well, for me, you're
13 already in lunchtime.

14 MR. SHELY: I know.

15 MR. HOAG: Okay. I understand what
16 you're saying. If it starts to go into
17 lunchtime, you could just stop me and ask
18 again if I'm about through or not.

19 MR. SHELY: Okay.

20 MR. HOAG: But this is just my rough
21 estimate.

22 MR. SHELY: I understand. I'm not
23 trying to limit you.

24 MR. HOAG: Okay.

25 BY MR. HOAG:

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1 Q. You know that you've been listed as an
2 expert witness in the Engle case, correct?

3 A. Are you addressing me?

4 Q. Yes. I'm addressing Doctor Lukas.

5 A. Yes, I realize that.

6 Q. What is your understanding of the
7 Engle case?

8 A. My understanding is that it is a class
9 action suit against the tobacco manufacturers
10 and that the Council for Tobacco Research is
11 also named as a plaintiff, I mean as a
12 defendant.

13 Q. Have you read the lawsuit?

14 A. Yes, I have looked at the suit.

15 Q. And what is your recollection of what
16 it alleges about CTR or the Council for Tobacco
17 Research?

18 A. Well, in general terms, there are some
19 issues about the integrity of the scientific
20 research program that the Council for Tobacco
21 Research administers, some allegations about
22 hiding research results and about some collusion
23 in a way between the tobacco companies and the
24 Council for Tobacco Research.

25 Q. How did you come to have a copy of the

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1 lawsuit?

2 A. It was provided to me by the attorneys
3 here at Bryan Cave, Mr. Ott and Mr. Shely.

4 Q. And how long ago did they provide it
5 to you?

6 A. My recollection is it's been some time
7 in April, March or April.

8 Q. And you're talking 1997?

9 A. '97, right.

10 Q. And was that the first time that they
11 provided you with any document?

12 A. I believe the first things that I saw
13 were lawsuits. I'm not certain what the proper
14 term is for that document but I read -- one of
15 the first things I read was the Engle case.

16 Q. And when you say the lawsuits, was
17 there more than one lawsuit you read?

18 A. I also had an opportunity to examine
19 the State of Arizona lawsuits against the
20 tobacco companies.

21 MR. SHELLEY: Counsel, for the record,
22 we're obviously talking about the complaint
23 but Doctor Lukas isn't necessarily familiar
24 with the legal terms.

25 MR. HOAG: Okay.

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1 BY MR. HOAG:

2 Q. Are you talking about the Attorney
3 General's lawsuit or is it something other than
4 the Attorney General's lawsuit in Arizona?

5 A. It's the Attorney General's lawsuit.

6 Q. Have you looked at any other state
7 Attorney General lawsuit other than the Arizona
8 lawsuit?

9 A. No.

10 Q. Are you listed as an expert or a fact
11 witness of any kind in any other tobacco-related
12 case involving CTR other than the Engle case?

13 A. At the moment, I'm also listed as an
14 expert witness in the Texas Attorney General
15 case.

16 Q. But not the Arizona case?

17 MR. SHELBY: Counsel, if I can clarify
18 it, we're just not at that stage yet.

19 MR. HOAG: And this is the attorney
20 speaking, right?

21 MR. SHELBY: This is Robert Shely
22 speaking.

23 BY MR. HOAG:

24 Q. But from your personal knowledge at
25 this point, your understanding is you've been

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1 listed as an expert in the Texas Attorney
2 General case and in the Engle case so far?

3 A. That's correct.

4 Q. And you may be an expert in other
5 Attorney General cases, but you don't -- that
6 hasn't been decided yet?

7 A. That's correct.

8 Q. Aside from other Attorney General
9 cases, where you may also in the future be
10 listed as an expert, are there any other
11 tobacco-related cases where you may be in the
12 future listed as an expert as far as you know?

13 A. At the present, I haven't made any
14 commitments along those lines.

15 Q. When were you first contacted in
16 regard to being an expert witness for the
17 Council for Tobacco Research?

18 A. I believe it was some time in March of
19 1997.

20 Q. And prior to the time you were
21 contacted in March of '97 to possibly be an
22 expert for the Council for Tobacco Research, had
23 you ever been contacted to be an expert in any
24 other tobacco-related issue?

25 A. No, I haven't.

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1 Q. And had you ever served as an expert
2 in any issue prior to that?

3 A. No, I have not.

4 Q. And by any issue, I mean even things
5 that aren't related to anything?

6 A. You mean in a litigation context?

7 Q. I mean in any context, asked to be an
8 expert or asked to be a consultant as an expert?

9 A. So outside of legal proceedings?

10 Q. Let me break it down. I'll start with
11 legal proceedings.

12 Other than the contact that happened
13 in March of 1997 related to serving as an expert
14 for CTR, have you ever been contacted to be an
15 expert for any tobacco-related issue?

16 A. It depends on how you define those
17 issues. I have served as a reviewer on the
18 nicotine study section for the California
19 Tobacco Related Disease Research Program, and,
20 hence, in a way I served as an expert there in
21 that I'm evaluating research grant proposals
22 that concern tobacco and issues of health.

23 And I also have reviewed grants for
24 several other agencies, so if that qualifies me
25 as being an expert, and in many cases since my

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1 expertise is in nicotine and nicotine receptors
2 in the brain and body, that might fit your
3 definition, but I'm not certain.

4 Q. Aside from serving as a reviewer for
5 research, have you been contacted to be an
6 expert for any other reason on anything related
7 to tobacco issues?

8 MR. SHELY: Are you still talking just
9 in a judicial context or in scientific
10 expertise?

11 MR. HOAG: This is a broad question
12 and he answered it broadly, and that's okay
13 with me.

14 BY MR. HOAG:

15 Q. I mean, aside from what you just
16 mentioned as being a reviewer for research
17 that's related to nicotine, nicotine receptors,
18 have you ever been contacted to be or have you
19 ever been an expert in any tobacco-related
20 issues other than for CTR?

21 A. Well, other than acting as a referee
22 for research grant proposals, I also will review
23 research articles that concern nicotine and
24 nicotine receptors that obviously are related to
25 tobacco, tobacco use.

1 I've been invited to give talks and
2 run an organization symposia in some scientific
3 societies including International Symposia on
4 Nicotine and NATO, N-A-T-O, Symposia on Nicotine
5 and its Targets in the Brain and Body.

6 I have -- and so I have spoken widely,
7 I've published widely. I've reviewed grants and
8 papers. I served on an honorary board on a
9 journal called Neurochemical Research in which
10 many issues relating to tobacco and nicotine
11 have been published.

12 Q. Now let me separate out the question
13 to only litigation.

14 Other than the CTR litigation, CTR
15 related litigation, where you were contacted to
16 be possibly an expert beginning in March of
17 1997, is there any other times where you have
18 ever been contacted to be an expert for any
19 litigation?

20 A. I believe you've raised that question
21 before. No, I haven't.

22 Q. And when you were first contacted in
23 March of '97, who contacted you?

24 A. Rodney Ott.

25 Q. Anyone else?

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1 A. Bryan Cave.

2 Q. You said -- from where?

3 A. From Bryan Cave, LLP, the legal
4 practice here in Phoenix.

5 Q. And did anyone other than Rodney Ott
6 contact you in March of 1997?

7 A. I spoke with Bob Shely as well.

8 Q. At the same time or separately?

9 A. I don't remember the details. I think
10 the first contact was with Rodney and I don't
11 remember whether Bob joined in during one of
12 those conversations or subsequent interaction.

13 Q. Was the contact by telephone?

14 A. The initial contact, yes, was by
15 telephone.

16 Q. And was it explained to you why you
17 were being contacted to be possibly an expert
18 witness?

19 A. Yes, it was.

20 Q. And what was explained to you?

21 A. It was explained to me that the
22 Council for Tobacco Research was being named as
23 a defendant in a series of class action and
24 Attorney General's, Attorney General suits, and
25 that it had been suggested that I might be

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1 willing to act as an expert witness on behalf of
2 the Council for Tobacco Research.

3 Q. And how did they come to contact you?

4 A. I'm not privy to that information, I'm
5 afraid.

6 Q. Did you ask?

7 A. No, I hadn't.

8 Q. No, you what?

9 A. No, I had not.

10 Q. Okay, so up to and including the time
11 that we're talking right now, you've never asked
12 how they came to contact you?

13 A. I don't remember asking that question
14 specifically. I think I assumed that there was
15 probably someone that -- I could only speculate
16 at the moment how that contact was made
17 initially and I don't know that I'm qualified to
18 speculate about that.

19 Q. Did anyone ever tell you why they
20 picked you to contact to be an expert witness
21 for CTR?

22 A. Not to my recollection.

23 Q. Are you associated with CTR in any
24 way?

25 A. I have received some grants from the

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1 Council for Tobacco Research and I'm currently a
2 grantee of the Council for Tobacco Research.

3 Q. Other than having received some grants
4 from CTR and being currently a grantee from CTR,
5 do you have any other association with CTR?

6 A. No, I haven't. Through those
7 interactions I've had the opportunity to meet
8 several of the staff members at CTR, and there
9 was one occasion when a symposia was held in New
10 York for the Council of Tobacco Research where I
11 was invited to attend shortly after I obtained
12 my first grant from them, but I have had no
13 direct interactions with them otherwise.

14 Q. Have you ever attended Scientific
15 Advisory Board meetings?

16 A. No, I have not.

17 Q. Do you know any of the members for the
18 Scientific Advisory Board?

19 A. Yes, I do.

20 MR. SHELY: Let me get an objection
21 in.

22 During when? Present time or any
23 time?

24 MR. HOAG: At any time.

25 A. Yes. I have known and do know some

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1 members of the Scientific Advisory Board.

2 Q. Which Scientific Board members do you
3 know or have you known?

4 A. I believe I have met Gordon Sato and I
5 know Doctor Leo Abood who I believe is a current
6 member of the Scientific Advisory Board.

7 Q. Could you spell Sato?

8 A. S-a-t-o.

9 Q. And Abood?

10 A. A-b-o-o-d.

11 Q. And is Sato still on the board?

12 A. To my recollection, I don't believe he
13 is. I'm basing that on review of some of the
14 documents pertaining to the operations of the
15 CTR, including their annual reports.

16 Q. How did you come to know, is it Doctor
17 Sato?

18 A. Doctor Gordon Sato, yes.

19 Q. Ph.D. or medical doctor?

20 A. A master and I believe he is a Ph.D.

21 Q. How did you come to know him?

22 A. I followed his work in the scientific
23 literature. He's very prominent in the field of
24 cell culture, tissue culture, growing of cells
25 in vitro.

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1 That is a basic model system that I
2 use in my own research, so I followed very
3 clearly the kinds of studies that Doctor Sato
4 had done and I believe at one time when I went
5 down to San Diego when I was in the San
6 Francisco Bay area, I stopped by his lab to say
7 hello and to introduce myself to him.

8 Q. When you say growing of cells in
9 vitro, what do you mean?

10 A. Tissue culture or cell culture is a
11 commonly used scientific technique where
12 proliferating cells, whether they be tumor
13 forming or not, can be maintained on plastic
14 tissues in a nutrient medium in a controlled
15 atmosphere of CO2 and carbon dioxide and
16 oxygenated air at body temperature, 37 degrees
17 Celsius.

18 Q. And that's what in vitro means?

19 A. In viro, it's a Latin term, in vitro.
20 In vitro is also a Latin term.

21 In viro means in the body. In vitro
22 means out of the body in lay terms.

23 Q. So Doctor Sato's specialty area is
24 research related to cell culture in vitro, is
25 that right?

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1 A. That's right.

2 Q. And you said this is an area of
3 interest of yours or is it a major area of yours
4 or both?

5 A. Both. It's a major area of interest
6 as well as a research tool. That technique of
7 maintaining cells in culture is a research tool
8 that I have used widely throughout my career.

9 Q. So the reason you got to know Doctor
10 Sato is your interest in that area, and you
11 visited him in San Francisco one time and that's
12 how you got to know him, correct?

13 A. I visited him when he was in San
14 Diego.

15 Q. San Diego. I'm sorry. What year was
16 that?

17 A. It was sometime between 1976 and 1980.

18 Q. Do you know whether or not he was a
19 member of the Scientific Advisory Board for CTR
20 at that time?

21 A. To my recollection, he was not.

22 Q. Do you know what year or years he was
23 a member of the Scientific Advisory Board for
24 CTR?

25 A. Not with great precision, I don't

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1 remember that, but I believe he was on the board
2 perhaps from 1990 through 1994.

3 Q. Did he ever encourage you to apply for
4 grants from CTR?

5 A. No, at the time that I believe that we
6 -- that I met him, he was not a member of the
7 board.

8 Q. Was he a member of the board at any
9 time when you received grants from CTR?

10 A. My grants from CTR went from 1984
11 through 1990 and I just began one again in 1996,
12 so if he was on the board from 1990 to 1994,
13 there would have been only a very minor
14 likelihood that he was on the board at the time
15 that I received a grant from them.

16 Q. Okay. Tell me about, is it Doctor
17 Abood, A-b-o-o-d?

18 A. That's right.

19 Q. And how did you come to know him?

20 A. Doctor Leo Abood, he is a, I believe
21 he may be retired now, but he's a professor of
22 pharmacology and the former chairman of
23 pharmacology at the University of Rochester
24 Medical School.

25 I have known him because our areas of

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1 research interests have overlapped. He has also
2 been studying nicotine and its targets in the
3 brain and body. He was one of the pioneers of
4 cell approaches to identify those targets for
5 nicotine in the brain using radio labeled
6 nicotine analogues.

7 And so I have followed his work. I
8 have had interactions with him at scientific
9 meetings and other members of his staff and
10 department.

11 I believe I also gave a research
12 lecture at the University of Rochester a few
13 years ago and probably have written in on my CV
14 the precise month and year that I gave that
15 talk.

16 So we've had a long professional
17 relationship, as I do with many other scientists
18 in that we run into each other at meetings. We
19 might talk. I haven't talked with him on the
20 phone extensively other than to arrange that one
21 visit to Rochester.

22 Q. Did he ever encourage you to apply for
23 CTR funding?

24 A. No. The issue never came up. I don't
25 believe I've ever discussed with him matters

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1 regarding the Council for Tobacco Research.

2 Q. What is a nicotine analogue?

3 A. Nicotine analogue is the drug that has
4 some similar structural similarities to nicotine
5 and that might act in some ways in the same way
6 that nicotine does on its targets in the brain
7 and body.

8 Q. What is the purpose of using an
9 analogue rather than actual nicotine?

10 A. There could be many. If you have a
11 lot of time, I could explain a few things to you
12 about my ideas about that.

13 Q. Why don't you just tell me a couple of
14 your ideas and we'll see how long that takes,
15 and if it takes too long, we'll just move on to
16 something else.

17 A. All right. As it turns out, in
18 research that Doctor Abood as well as I have
19 contributed to, it's clear that there are many
20 potential targets for nicotine in the brain and
21 body. These are called receptors. They're
22 called nicotine acetylcholine receptors because
23 they interact with the natural chemical
24 messenger made in the brain and body called
25 acetylcholine, but they are a sub fraction of

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1 the receptors for acetylcholine in that there is
2 one sub fraction of those acetylcholine
3 receptors that can interact with nicotine.

4 So if you imagine that these are also
5 targets for particular and maybe particular
6 receptors, maybe we can just call them neck
7 receptors. There seems to be many varieties of
8 neck receptors and it's possible that some of
9 them might be involved in mediating, for
10 example, an enhancement of cognition that
11 nicotine has been suggested to induce, perhaps
12 not by acting at the targets for nicotine that
13 would alter blood pressure, for example.

14 And so many scientists as well as
15 probably over fifty drug companies around the
16 world are interested in identifying and creating
17 nicotine analogues that might have some effects,
18 some of the -- some beneficial, if you will,
19 loosely using that phrase, beneficial effects of
20 nicotine while minimizing side effects.

21 Q. What are the side effects of nicotine?

22 A. Well, nicotine to my understanding can
23 induce some nausea. It has a lot of, there are
24 many targets for nicotine across the body.
25 Every movement you make is affected, is allowed

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1 because nicotine receptors are working. Every
2 time you have an autonomic response -- in
3 Florida, if you go out jogging in the summertime
4 on the beach, in order to stay alive, if you try
5 to do that exercise, your respiration rate, the
6 rate at which you're breathing, your heart rate,
7 your blood pressure will go up to help keep you
8 alive as you're going along.

9 None of those responses would occur if
10 the nicotine receptors involved in mediating
11 those responses weren't active and probably
12 compliments your ability to hear me if not see
13 me or smell me because nicotine is involved in
14 olfaction, nicotine receptors are involved in
15 olfaction and audition.

16 Those sorts of sensory responses are
17 mediated through nicotine receptors as are
18 responses involved in emotion and cognition,
19 higher order processing, if you will, in the
20 brain.

21 So nicotine has the potential to
22 affect many responses in biological systems, and
23 if there is someone who's interested in
24 targeting only a few of those, and we consider
25 the other affects of nicotine to be side

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1 effects, whether they might be beneficial or
2 undesirable, depends in certain situations, you
3 can see how there would be a broad interest
4 across the scientific community both in academia
5 and in the private sector in nicotine analogues.

6 Q. You mentioned a lot of things about
7 nicotine, and the way it sounds is like people
8 have to have nicotine to think, see, hear or
9 smell. Is that right?

10 A. Well ---

11 MR. SHELBY: I object to the form.

12 Misstates his testimony.

13 BY MR. HOAG:

14 Q. Is that right or am I not
15 understanding what it is you're saying?

16 A. Well, no, that's wrong. Actually, I
17 don't know that people need nicotine. Again,
18 nicotine, the receptors for nicotine also happen
19 to be targets for a natural chemical substance
20 called acetylcholine, so while I'm calling these
21 things nicotine receptors as I mentioned before
22 as a bit of a shortcut, in actuality there are
23 receptors in the brain and body called
24 acetylcholine.

25 If you had phrased the question do we

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1 need acetylcholine to function, I would
2 certainly say yes.

3 Q. But you don't need nicotine to get
4 acetylcholine, right?

5 A. No. You don't need nicotine to get
6 acetylcholine. Acetylcholine is naturally made
7 in the brain and body.

8 Q. In fact, I mean, choline is something
9 you be can buy in a health food store, isn't it?

10 A. Yeah, that's a bit of a diversion.
11 Choline is a substance that in fact
12 you can buy at a drug store. The relationship
13 between choline and acetylcholine is that
14 choline is -- acetylcholine is a large molecular
15 -- if you were here I would draw what the
16 structure of the molecule is, but an element
17 within the acetylcholine is choline, and
18 acetylcholine is actually formed through an
19 enzyme process, a catalyzed process where
20 acetate is contributed from where acetate
21 combines with choline to make acetylcholine.

22 Q. So are you saying that the choline you
23 can buy in a health food store has anything at
24 all to do with the formation of acetylcholine or
25 it has nothing to do with it?

KLEIN-BURY & ASSOCIATES

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1 A. I'm saying that yes, that choline as
2 made in the body and perhaps as provided as a
3 dietary supplement, could ultimately find its
4 way into the molecular structure of
5 acetylcholine molecules. That distinguishes it
6 from nicotine. There is no metabolic
7 interaction or chemical conversion involving a
8 conversion from acetylcholine, from nicotine to
9 acetylcholine.

10 Q. So is it a fair statement to say that
11 at least some of your research looks at possible
12 positive aspects of nicotine?

13 A. I'm not sure that I understand. Could
14 you restate?

15 Q. I'll try.

16 Does some of your research look at
17 potentially beneficial effects of nicotine?

18 A. We do research on nicotine receptors.
19 Our studies are quite fundamental issues. As to
20 whether the effects are positive or negative are
21 not things we're concerned with but we're
22 interested in more fundamental issues.

23 Q. Can you be more clear? I'm not sure I
24 understand your answer.

25 You're not interested in whether or

KLEIN-BURY & ASSOCIATES

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1 not there is any beneficial effects of
2 nicotine? Is that what you're saying?

3 A. I'm saying that our research isn't --
4 our research is quite basic research. We're
5 interested in nicotine receptors and identifying
6 them, determining where they are in the brain
7 and body and what they do.

8 Issues regarding whether nicotine is
9 beneficial or not is something that isn't of
10 immediate concern in our research program.

11 Q. Is it of any concern?

12 A. Is it of any concern?

13 Q. Your research program?

14 A. Is what any concern?

15 Q. Whether or not nicotine is beneficial
16 under any circumstances?

17 A. Well, I think as a research scientist,
18 you know, ultimately we're interested in issues
19 like that. We'd like to understand how
20 receptors for nicotine or for acetylcholine act
21 and how interactions with those receptors with
22 nicotine, where the sites might be that are
23 involved with the interaction with nicotine with
24 those receptors.

25 Q. What about detrimental effects? Are

KLEIN-BURY & ASSOCIATES

1 you interested in finding out whether nicotine
2 has any detrimental effects on people?

3 A. Again, our research program is
4 concerned with more basic and fundamental
5 issues. I'm not -- whether it has positive or
6 detrimental effects isn't of immediate concern
7 in our research program.

8 Q. Okay. I guess I'm really getting
9 confused.

10 You're telling me that whether it has
11 positive effects or detrimental effects is not
12 of immediate concern in the research that you
13 do, is that correct?

14 A. That's right.

15 Q. Is it of any concern at all?

16 MR. SHELY: Asked and answered.

17 MR. HOAG: Are you whispering?

18 MR. SHELY: No. I told -- I'm telling
19 you that he's already answered it and he
20 can answer.

21 MR. HOAG: I heard whispering and if
22 you're whispering to the witness, that's
23 inappropriate, of course.

24 MR. SHELY: I'm telling him, as I've
25 told you, that he's already answered the

KLEIN-BURY & ASSOCIATES

1 question.

2 MR. HOAG: Well, it's inappropriate to
3 whisper to him that he's already answered
4 the question so as not to respond now.

5 MR. SHELY: John, I didn't hear you.

6 MR. HOAG: I said you know that's
7 inappropriate.

8 MR. SHELY: I'm not doing anything
9 inappropriate.

10 MR. HOAG: You were whispering to the
11 witness and if I was there right now and
12 could see you do it, you wouldn't do it in
13 front of me, so don't do it when I'm not
14 there to see you.

15 MR. SHELY: Don't make any accusations
16 that you can't back up.

17 MR. HOAG: I can back it up because
18 you told me you did it.

19 MR. SHELY: No, I told you that I told
20 him he already answered the question.

21 MR. HOAG: And you were whispering to
22 the witness.

23 MR. SHELY: I'm not whispering to the
24 witness.

25 MR. HOAG: Don't play games, John.

KLEIN-BURY & ASSOCIATES

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1 MR. SHELLEY: Well, that's what I'm
2 trying to avoid.

3 You've already answered that question.

4 MR. HOAG: So you're telling him that
5 he shouldn't answer that question right
6 now, is that right? Is that also what you
7 whispered to him?

8 MR. SHELLEY: John, we can go to court
9 if you want. If you want to take the
10 deposition, take the deposition. I'm not
11 whispering to the witness.

12 MR. HOAG: That depends on how many
13 more times you're telling him to say ---

14 MR. SHELLEY: Are you going to ask a
15 question or are you going to argue? Let's
16 go.

17 MR. HOAG: Would you read back my last
18 question before the whispering and stuff
19 took place?

20 (Thereupon, the question referred to
21 was read by the reporter as recorded.)

22 MR. SHELLEY: Same objection.

23 BY MR. HOAG:

24 Q. And by that I mean the detrimental or
25 the benefits of nicotine, are there any concerns

KLEIN-BURY & ASSOCIATES

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1 at all as regards the research that you do?

2 MR. SHELY: Same objection.

3 A. As a research scientist, my primary
4 focus is on fundamental issues regarding
5 nicotine and its targets.

6 Obviously and particularly in this day
7 and age, and particularly when research
8 scientists as well as drug companies are
9 interested in looking for effects of nicotine
10 that could be beneficial, I think we'd all agree
11 that nicotine can relieve pain, it can relieve
12 anxiety, it can improve memory and cognition.

13 Those are things that if nicotine has
14 effects to enhance those functions or any
15 analogues like that, we all would be interested
16 in, so in the long range and with a view as a
17 biomedical scientist towards developing ideas or
18 drugs or tools or pharmaceuticals to help treat
19 maladies and improve the quality of life, of
20 course I'm interested in that in the long term,
21 but it isn't an immediate concern of mine and
22 I'm not a behavioral psychologist.

23 I think a behavioral physiological
24 psychologist would be the kind of people --
25 would be the kinds of people who would be able

KLEIN-BURY & ASSOCIATES

1 to address that question from a stand of -- from
2 a greater expertise than I would.

3 Q. Have you done any research about the
4 addictiveness of nicotine?

5 A. I'm not sure what you mean by
6 addiction. How do you define addiction or
7 addictiveness?

8 Q. You are aware that nicotine is
9 addictive, correct?

10 A. No, I'm not certain that I would agree
11 with that opinion. It depends on the definition
12 that's used of addiction.

13 Q. Well, let me just ask you: Is
14 nicotine addictive?

15 A. Again, it depends on what the
16 definition of addiction means. What's the
17 definition that's used?

18 Q. Does nicotine enhance memory?

19 A. It seems that there are some studies
20 that suggest in laboratory animals as well as
21 patients, including demented patients such as
22 Alzheimer's patients, that nicotine does enhance
23 their cognitive capacity, yes.

24 Q. Now you didn't need a definition of
25 memory to answer that question, so let me just

KLEIN-BURY & ASSOCIATES

1 try again.

2 Is nicotine addictive?

3 A. I would again say, though, it depends
4 on your definition of addictive. You're right.
5 Perhaps I should have asked you to define memory
6 to be more clear.

7 I didn't say that it doesn't have
8 cognitive capacity. This is a complex issue as
9 well and perhaps I jumped the gun on the issue
10 regarding memory. There are many, many
11 different ways to measure memory or cognitive
12 capacity.

13 There's a lot of scientific debate of
14 which are the best ways if there are any because
15 memory and cognition are complex phenomena.

16 But I believe, whether it's in lay
17 terms or scientific terms, cognitive capacity,
18 cognitive includes memory.

19 Q. So is nicotine addictive?

20 MR. SHELY: Asked and answered.

21 MR. HOAG: It hasn't been answered
22 yet.

23 MR. SHELY: Well, he can't answer the
24 question as you phrased it, John, so you'll
25 have to rephrase it.

KLEIN-BURY & ASSOCIATES

1 BY MR. HOAG:

2 Q. Why did you not have the problem with
3 answering my question about memory but yet you
4 have the problem answering it about addiction?

5 A. Because there is a lot of controversy
6 as well about -- probably less controversy about
7 what memory means in terms of what the formal
8 scientific rigorous definition is and what the
9 lay understanding of it is.

10 I believe that the lay understanding
11 of the term addiction and the scientific
12 rigorous definition of it are somewhat different
13 and there's some controversy about that.
14 Probably more about it than, in general terms,
15 the issue of memory.

16 Q. Is there less controversy that
17 nicotine enhances memory than there is that
18 nicotine is addictive?

19 A. No, I think there's less controversy
20 about what memory means.

21 Q. So let me ask my question again:
22 Is there less controversy that
23 nicotine is addictive as compared to less
24 controversy that nicotine enhances memory?
25 Which of those two is less controversial?

KLEIN-BURY & ASSOCIATES

1 A. How do you define addiction?

2 Q. Do you have a definition for
3 addiction?

4 A. Yes, I believe I do.

5 The rigorous scientific definition of
6 addiction has six complements to it.

7 One, is that an addictive drug is
8 intoxicating. Another is that a user of an
9 addictive drug is driven compulsively to seek
10 and use the drug. The drug is, if it's
11 addictive is -- there should be development of
12 dependence which there becomes a requirement for
13 the user to have the drug on board.

14 There are also withdrawal effects. If
15 the user becomes abstinent after using an
16 addictive substance, tolerance to an addictive
17 substance develops in that the user needs more
18 and more of the substance to achieve a similar
19 biologic response.

20 And another component in the very
21 rigorous definition of an addictive substance is
22 that it's a substance the use of which
23 immediately endangers the user and/or other
24 members of society.

25 Q. Okay. So by your definition, to be

KLEIN-BURY & ASSOCIATES

1 addictive it has to immediately endanger the
2 user, is that right?

3 A. Yes.

4 Q. Seems like you've come up with a
5 tailor made way so as to avoid calling nicotine
6 addictive, haven't you?

7 MR. SHELY: I object to the form.
8 It's argumentative.

9 BY MR. HOAG:

10 Q. Haven't you?

11 A. No, I haven't. In fact, that is the
12 definition of addiction in a medical and nursing
13 dictionary.

14 Q. And what particular medical and
15 nursing dictionary are you referring to?

16 A. I believe it's one that I have at
17 home. I believe it's called -- I believe one of
18 the authors is Meane, M-e-a-n-e.

19 Q. Have you seen any textbook definitions
20 of addiction that are different from that
21 definition?

22 A. Well, there is some controversy about
23 that. This is, you know, it's typical in
24 science, particularly in behavioral science, to
25 have an evolution of thoughts, an evolution of

KLEIN-BURY & ASSOCIATES

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1 definitions over the years and often the lay
2 public, their understanding of the term like
3 addiction is quite a bit different than even the
4 definitions of the leaders in the field are
5 discussing and have a controversy about, so
6 there is quite a bit of evolution in those kinds
7 of definitions.

8 Now I have seen in more lay
9 publications such as dictionaries, very much
10 watered down definitions of addiction that don't
11 have those six elements.

12 Q. Do you mean they don't have all of
13 them or any of them?

14 A. In some cases, they don't have any of
15 them, or maybe perhaps just one or two.

16 Q. So based on the definition that you
17 prefer of addiction, is nicotine addictive?

18 A. I don't believe that it is, partly
19 because I don't believe that it's an
20 intoxicating substance and unlike if I were
21 driving on the freeway with someone who happened
22 to be smoking, I don't believe I would be in as
23 much danger as if I was with someone who was
24 intoxicated, with someone who was using a
25 narcotic or some other substance.

KLEIN-BURY & ASSOCIATES

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1 Q. So, therefore, it's not addictive, is
2 that right?

3 A. So using the definition, the rigorous
4 scientific definition with the six elements that
5 I laid out for you, it's my opinion that
6 nicotine is not addictive, according to that
7 definition.

8 Q. Have you been asked that question
9 before?

10 A. In a few forms, I have, yes.

11 Q. What were the forums that you were
12 asked that question in?

13 A. Well, they include family gatherings,
14 for example. I just had an opportunity to have
15 a discussion about nicotine and use with some of
16 my relatives who happen to be habitual users of
17 tobacco products.

18 Q. And you explained to them that it's
19 not addictive, is that right?

20 A. No, we had -- knowing that I work on
21 nicotine and nicotine receptors, they were
22 interested in my views on it and so we had
23 family discussions about the properties of
24 tobacco, the issues of nicotine's role and the
25 effects of tobacco and tobacco-related disease.

KLEIN-BURY & ASSOCIATES

70001727

1 Q. So did you tell them that they should
2 keep smoking because nicotine make them smarter?

3 MR. SHELLEY: Objection to the form.
4 Argumentative. Why don't you just ask a
5 real question?

6 MR. HOAG: That's a real question.
7 BY MR. HOAG:

8 Q. Did you tell them they should keep
9 smoking because nicotine makes them smarter?

10 MR. SHELLEY: That's an argumentative
11 question.

12 BY MR. HOAG:

13 Q. You can answer.

14 A. No. I didn't at any time make such a
15 statement.

16 Q. Did you advise them that it was a good
17 idea to keep smoking?

18 MR. SHELLEY: Same objection.

19 A. No, I didn't advise any of my
20 relatives to keep smoking.

21 Q. Did you advise them that it was a
22 habit that will kill them if they keep smoking?

23 MR. SHELLEY: Same objection.

24 A. No, I don't -- I didn't make that kind
25 of a statement to them, no.

KLEIN-BURY & ASSOCIATES

70001728

1 Q. Did you advise them that it would be
2 in their best interest to quit smoking?

3 A. I believe that our discussion ranged
4 more about what the effects of nicotine are. I
5 tried to get them to understand what it is that
6 -- and try to understand from them what it's
7 about smoking that they enjoyed or disliked.

8 Q.

9 **REDACTED**

10

11 A.

12 **REDACTED**

13 Q.

14

15 A.

16

17 **REDACTED**

18 Q.

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20 A.

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22 Q.

23 **REDACTED**

24 Q.

25 A.

KLEIN-BURY & ASSOCIATES

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REDACTED

A.

REDACTED

Q.

A.

Q.

REDACTED

A.

Q. Have you ever smoked cigarettes?

A. Yes, I have had a few cigarettes in my
life.

Q. Have you ever smoked cigarettes
regularly?

A. No, I have not.

Q. What's the most cigarettes you ever
smoked in a week?

KLEIN-BURY & ASSOCIATES

70001730

1 A. Oh, probably no more than two or
2 three.

3 Q. Why do you not smoke cigarettes?

4 A. It was something that didn't interest
5 me. I didn't really see any benefit to it. I
6 was interested in seeing what it did because I
7 had a father and some friends who smoked and --
8 but it just, it's something that I never, even
9 though I'm not, if you will, a virgin with
10 regard to tobacco exposure, it's something I
11 never took up seriously at all.

12 Q. How old were you when you first tried
13 a cigarette?

14 A. I was probably 18 or 19 years old.

15 Q. Does cigarette smoking cause lung
16 cancer?

17 A. I don't believe that there is evidence
18 to cause a causal relationship there, but then
19 again, the issue of causal relationship, that's
20 a definition. We should be precise about what we
21 mean.

22 Q. Does cigarette smoking cause any
23 disease?

24 MR. SHELY: John, I'm going to let him
25 answer this series of questions but I want

KLEIN-BURY & ASSOCIATES

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1 to make sure you understand that this is
2 not the designated area of Doctor Lukas's
3 expertise and we don't hold him out as an
4 expert on these issues.

5 MR. HOAG: Are you holding him out as
6 an expert on addiction?

7 MR. SHELY: I'm holding him out as an
8 expert on the subjects that were listed in
9 the letter.

10 MR. HOAG: That doesn't include
11 addiction. You didn't mention that when I
12 was asking him the addiction questions,
13 that's all.

14 MR. SHELY: I'm just telling you,
15 John, what he has been proffered for and
16 thought you might want to ask him some
17 questions about that, but it's your
18 deposition.

19 MR. HOAG: That's true.

20 BY MR. HOAG:

21 Q. Does cigarette smoking cause any
22 disease?

23 MR. SHELY: Same objection.

24 A. My expertise in those kinds of
25 questions is quite limited. I don't know that I

KLEIN-BURY & ASSOCIATES

1 have more expertise along those lines than any
2 other scientist or well-educated lay person
3 because it's not the area that I investigate.

4 But, from a scientific perspective, I
5 believe I'm an expert in science, that I think
6 that the issue, on a very, very important issue
7 is causal relationships and just as the
8 definition of addiction is something that is
9 subject to some controversy and sometimes that
10 question is often for purposes that aren't
11 necessarily significant, so the ability to
12 demonstrate causal relationship of or the
13 definition of it or the implications of a causal
14 relationship, sometimes there is a loosening of
15 that term, but in the strictest scientific
16 sense, I don't believe that there is any
17 evidence that smoking causes -- is the sole
18 cause, without smoking you would never get a
19 disease.

20 Q. Is it more likely than not that at
21 least one person in the United States has died
22 of lung cancer as a result of smoking
23 cigarettes?

24 MR. SHELLEY: Objection. Again, that's
25 not his expertise.

KLEIN-BURY & ASSOCIATES

70001733

1 MR. HOAG: You can answer.

2 A. I don't know that I'm a physician to
3 make that sort of appraisal.

4 Q. Well, as a person that's a scientist
5 and has above average knowledge about nicotine
6 and other scientific areas, is it more likely
7 than not that at least one human being in the
8 United States has ever died from lung cancer as
9 a result of smoking cigarettes?

10 MR. SHELLEY: Same objection. Lack of
11 foundation.

12 A. It's a highly conjectural statement or
13 question and I don't know that we have the tools
14 or resources to make such a determination.

15 Q. So you don't feel qualified, based on
16 all of your knowledge, to express an opinion as
17 to whether or not it's more likely than not that
18 at least one person has died in the United
19 States from lung cancer as a result of smoking
20 cigarettes, is that correct?

21 A. I'm not sure that I follow. Could you
22 repeat, please?

23 MR. HOAG: Will you read the question,
24 please?

25 (Thereupon, the question referred to

KLEIN-BURY & ASSOCIATES

1 was read by the reporter as recorded.)

2 A. The term as a result of, if that
3 implies a singular causal relationship, then I
4 don't think that the scientific information -- I
5 don't think we have the tools to make such an
6 assessment.

7 Q. Have you ever known anyone who smoked
8 cigarettes who wanted to quit but just wasn't
9 able to?

10 A. I don't think I have, including some
11 of my relatives. In discussions with them, they
12 have been able to stop. So I don't know that I
13 could really say that I've known someone who
14 truly has been unable to stop.

15 Q.

16

17 A.

REDACTED

18 Q.

19 A.

20

21

22 Q.

REDACTED

23

24 A.

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KLEIN-BURY & ASSOCIATES

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1 Q.

2

3 MR. SHELY:

4

5 A.

REDACTED

6 Q.

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8 A.

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10 Q

REDACTED

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16 A.

17 Q.

REDACTED

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19 A.

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REDACTED

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25 Q. When you say probably not good for

KLEIN-BURY & ASSOCIATES

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MR. SHELY:

BY MR. HOAG:

REDACTED

Q.

A.

A.

REDACTED

Q

A.

Q.

A.

Q.

REDACTED

A.

Q.

A.

Q.

KLEIN-BURY & ASSOCIATES

1 A. Because I think that, first of all,
2 it's not a particularly appealing habit. And I
3 think there are -- there is evidence suggesting
4 that tobacco usage is a risk factor and be clear
5 about the fact that having the opinion something
6 that is a risk factor does not imply or
7 demonstrate causality that it is a risk factor
8 for some diseases.

9 Q. **REDACTED**

10

11 MR. SHELY: Objection to the form.

12 BY MR. HOAG:

13 Q.

14 A. **REDACTED**

15

16 Q. The nicotine in the tobacco has
17 physiological effects on the brain, right?

18 A. Yes, that's my professional as well as
19 personal opinion.

20 Q. It gets to the brain in ten seconds or
21 less once you puff on it, right?

22 A. That's what is reported in the
23 literature, yes.

24 Q. That's really a fast physiological
25 reaction, right?

KLEIN-BURY & ASSOCIATES

1 A. That's right.

2 Q. And it affects the Dopamine level,
3 correct?

4 A. I believe that that's been
5 demonstrated in some animal models, yes.

6 Q. And cocaine affects the Dopamine level
7 too, correct?

8 A. I believe that that has been
9 demonstrated as well in some animal models.

10 Q. And cocaine gets to the brain very
11 rapidly too, correct?

12 A. Yes.

13 Q. Do you know whether more people die
14 from taking cocaine as compared to smoking
15 cigarettes?

16 A. Well, again, I don't know that's an
17 area where I'm an expert and we have to be
18 careful there because, again, I'm not sure what
19 you imply by causing death or not causing
20 death.

21 Q. Have you ever known anyone who
22 contracted lung cancer who smoked, who continued
23 to smoke after contracting the lung cancer after
24 they realized now they had lung cancer?

25 A. No, I don't know anyone who has had

KLEIN-BURY & ASSOCIATES

70001739

1 lung cancer and continued to smoke.

2 Q. No, if there are such people, that
3 would be a very strong indication that cigarette
4 smoking is addictive, wouldn't it?

5 MR. SHELY: Objection to the form.

6 BY MR. HOAG:

7 Q. Wouldn't it?

8 A. I disagree completely. I think that's
9 a very broad sweeping statement that you made.

10 Q. Do you know whether or not there are
11 people who have a hole in their throat as a
12 result of operations and will smoke through the
13 hole in their throat? Are you aware of that?

14 A. Well, previously you've been asking me
15 if I knew anyone and now you're asking me if
16 I've been aware, is that correct?

17 Q. Is it correct that you heard the
18 question correctly? Yes, you did hear the
19 question correctly.

20 A. Actually last night I became aware of
21 at least that sort of phenomena.

22 I happened to be watching I believe
23 something on the public broadcast, maybe a
24 McNeil Lehrer report where they were talking
25 about the tobacco campaigns in Oregon and they

KLEIN-BURY & ASSOCIATES

1 showed a clip from a commercial run in the
2 tobacco campaign in California that showed a
3 woman with a tracheostomy tube who is puffing on
4 a cigarette through that, so that's the first
5 time that I believe I've ever seen that.

6 I believe in the Engle deposition
7 there may be some remarks about someone who was
8 a lung cancer patient and continued to smoke, so
9 I'm aware of that, but I don't personally know
10 anyone who is a lung cancer patient who smoked.

11 Q. Do you know the percentage of people
12 who smoke who contract lung cancer who continue
13 to smoke?

14 A. No, I'm not, I'm not aware of that
15 information.

16 I know where I could go and look it
17 up, but it's not at the tip of my tongue.

18 Q. Do you think that has anything to do
19 at all with whether or not cigarette smoking is
20 addictive?

21 MR. SHELY: Same objection as stated
22 before in the deposition, and also broad.

23 BY MR. HOAG:

24 Q. You can answer.

25 A. Could you restate the question?

KLEIN-BURY & ASSOCIATES

1 Q. Do you think that has anything to do
2 with whether or not cigarette smoking is
3 addictive?

4 A. If what has anything to do?

5 Q. The percentage of people who continue
6 to smoke after being diagnosed with lung cancer?

7 MR. SHELY: Note my objection to lack
8 of foundation because he does not have the
9 information for the basis of the question.

10 BY MS. HOAG:

11 Q. You can answer.

12 A. Again, I don't know what the
13 percentage is of individuals who have lung
14 cancer who continue to smoke.

15 Q. Well, would there be ---

16 A. Then we come to the definition of
17 addiction.

18 Q. Would there be any percentage that
19 would have any impact on your opinion on whether
20 or not cigarette smoking is addictive?

21 In other words, if you found out that
22 40 percent of all the people who get diagnosed
23 with lung cancer continue to smoke cigarettes
24 after the diagnosis, would that have any impact
25 on your opinion of whether or not cigarette

KLEIN-BURY & ASSOCIATES

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1 smoking is addictive.

2 MR. SHELY: Objection. It's an
3 incomplete hypothetical and he doesn't have
4 information on which to base an answer.

5 BY MR. HOAG:

6 Q. You can answer.

7 A. Well, if there was a scientific or
8 clinical medical demonstration of a percentage,
9 if there was some data about it, I don't know --
10 I don't see how anyone can draw any --
11 extrapolate from that information anything about
12 the addictiveness of nicotine or addictiveness
13 of smoking.

14 MR. SHELY: John?

15 MR. HOAG: Yes.

16 MR. SHELY: Can we take five for a
17 men's room break here?

18 MR. HOAG: Sure.

19 MR. SHELY: Do you want to keep the
20 line open here?

21 MR. HOAG: That's a good idea because
22 if we go and shut off the line, we're
23 totally disconnected and the number won't
24 work any more.

25 MR. SHELY: Let's keep it open and

KLEIN-BURY & ASSOCIATES

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1 we'll be back after freshening up and
2 getting a drink.

3 (Short recess).

4 BY MR. HOAG:

5 Q. I want to go back to the concept of a
6 nicotine analogue and I'm going to ask you some
7 questions, and if I'm misunderstanding or you
8 need to clarify what I'm asking, please do that,
9 because this is an area that obviously you have
10 the expertise in.

11 Is it possible to develop a nicotine
12 analogue for specific things like, for example,
13 if you found that nicotine did have some memory
14 enhancement qualities, is it possible to develop
15 an analogue for that specific purpose?

16 A. I think that is one of the hopes of
17 properly investigating one of the fifty
18 pharmaceutical companies as well as a number of
19 individuals in academia.

20 Q. So the hope is to find out, to find
21 things that may possibly be beneficial about
22 nicotine and develop an analogue that doesn't
23 have the detrimental effects of nicotine, is
24 that fair?

25 A. I mean, there are a couple of ways to

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1 do that, yes, to identify an analogue of what
2 has beneficial effects of nicotine and doesn't
3 have side effects.

4 I don't know that I would call them
5 detrimental because maybe someone doesn't need
6 to have an antianxiety on board while they're
7 trying to improve their cognition or attention.

8 But side effects, yes, that is the
9 goal, whether it's achievable or not to develop
10 a nicotine analogue that would have effects on
11 one modality but not others, is something that
12 time will tell.

13 Q. The research that you said that was
14 funded through CTR, you said that began in 1990,
15 is that correct?

16 A. I've had three periods of grant
17 funding from the Council for Tobacco Research;
18 from 1984 to 1987, from 1987 to 1990, and
19 currently from 1996 through 1999, and I believe
20 all of that information is available in my
21 curriculum vitae.

22 Q. In 1984 through 1987 when you first
23 had something funded by CTR, what project or
24 projects did that involve?

25 A. The -- I believe the project was to

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1 investigate the effects of acute and chronic
2 nicotine exposure and numbers and function of
3 different targets or receptors for nicotine and
4 acetylcholine.

5 Q. So acetylcholine is the receptor that
6 would relate to memory, is that correct?

7 A. So acetylcholine is the chemical
8 messenger that targets some of the same
9 receptors that nicotine does. And the receptor
10 and its interaction with acetylcholine has been
11 implicated in lots of things, including memory.

12 Q. What things other than memory?

13 A. Well, we already discussed about how
14 every movement you make is made because those
15 receptors are working. Every autonomic response
16 in the brain, our understanding is moving along
17 but still is quite immature about the effects of
18 acetylcholine and its receptors, but there
19 clearly are implications that it is involved in
20 modulating the chemical soup in which your brain
21 is bathed, thereby affecting a variety of brain
22 and body functions.

23 Q. Okay, and those would include memory
24 and just name the other things that you can
25 think of that it would include.

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1 MR. SHELLEY: When we say it would
2 include, I guess I'm not sure what you're
3 talking about. Acetylcholine would include
4 for the receptors?

5 MR. HOAG: Who is asking this?

6 MR. SHELLEY: Bob Shely.

7 MR. HOAG: It's based on what his
8 prior answer was.

9 MR. SHELLEY: Well, I'm going to
10 object. The question is indefinite,
11 ambiguous.

12 A. But I believe I can answer that
13 without a problem.

14 Q. Go ahead.

15 A. Acetylcholine and its interactions
16 with its receptors of the nicotinic variety, of
17 the nicotine variety, have been implicated in
18 memory, in attention, in cognition and again
19 these terms are all somewhat loose, in anxiety,
20 in depression, as well as in analgesia, the
21 sensation of pain and the variety of other
22 senses from vision to olfaction to audition.

23 Q. So let's take, like, for example,
24 anxiety, does it heighten anxiety? What does it
25 do to anxiety, if anything?

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1 MR. SHELY: Same objection to form but
2 go ahead, you can answer.

3 A. A lot of these issues, I don't know if
4 this is so much of a scientific forum as it is a
5 local forum but a lot of -- we don't know a lot
6 about all these effects. The jury is still out
7 and will be out for some time, understanding the
8 brain is really a very difficult problem, but if
9 one can extrapolate from studies looking at the
10 effects of nicotine itself, nicotine as a
11 pharmacological proof. If you look at the
12 effects of nicotine on its receptors, you can
13 glean some information about acetylcholine and
14 its receptors, and it's suggested from animal as
15 well as human studies, for example, that
16 nicotine does relieve anxiety.

17 Q. How about depression?

18 A. The -- my understanding of the
19 literature is that there are some studies in,
20 some studies mostly with withdrawal studies in
21 humans. It's a little hard to measure
22 depression in an animal and it's a little hard
23 to measure anxiety in animals as well, so
24 there's a lot of controversy about that, but
25 looking at reports from individuals as to

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1 perhaps why they began to smoke, or some of the
2 effects that they suggest that they experienced
3 as they withdraw from smoking, or from nicotine,
4 suggested nicotine may have some effects to
5 counteract depression and removal from nicotine,
6 withdrawal of nicotine might enhance or heighten
7 depression, perhaps transiently.

8 Q. What about vision?

9 A. Well, with vision, things are even
10 less certain there. The extrapolation comes
11 from studies of the receptors for nicotine and
12 acetylcholine.

13 It's clear that they are widely
14 dispersed through the retina and through parts
15 of the brain, such as the lateral geniculate
16 nucleus and the visual cortex, but that just
17 simply implies that nicotine and acetylcholine
18 receptors played some role in those functions.

19 I don't believe that there is any
20 evidence more direct than that.

21 Q. Well, this evidence that you've
22 described such that it is related to vision, is
23 it that it enhances vision or decreases vision
24 or has what impact on vision, if anything?

25 A. Those kind of experiments haven't

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1 really been conducted. No one can say
2 definitely what the effects are. It's just
3 clear that receptors for nicotine are in
4 position. They are in those structures that I
5 just mentioned and they are in the position to
6 affect vision, but we don't understand at all
7 what they do or what they might possibly do.

8 Q. And is the same thing basically true
9 for smell as is true for vision as far as you're
10 answer is concerned right now?

11 A. Yes, receptors for nicotine have been
12 identified in the olfactory epithelium and in
13 the olfactory processes sensation of smell, but
14 roles that nicotine receptors play in that
15 sensation are not at all clearly delineated.

16 Q. Can you tell me one more time the name
17 of the project that began in '84 and ended in
18 '87?

19 A. I haven't committed the name of the
20 project to memory.

21 Q. You said effects of acute and chronic
22 and I didn't get the rest. If you can point it
23 out on your CV, I'll just read it from there.

24 MR. SHELY: He's looking at his CV for
25 the record to identify the page.

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1 A. According to this, actually I was
2 mistaken. It wasn't a grant that started in
3 1984. It was a grant that started in 1985. And
4 the title of the grant ---

5 MR. SHELLEY: For the record, would you
6 state where you're looking so he can follow
7 it with you?

8 A. Okay. I'm looking at, it's not a
9 numbered page. I'm looking at a word grants and
10 contracts in my CV. It's on page ii under a
11 word grants and contracts at the very top of
12 that page, Council for Tobacco Research grant
13 number 1694, the title of Acetylcholine
14 Receptors.

15 Q. Okay. I think I see it here. It says
16 from January of 1985 to December of 1987, and
17 the Council for Tobacco Research funded \$97,640
18 for this project?

19 A. That's right, in total direct costs.
20 Those are costs that I actually got to use for
21 laboratory operations.

22 Q. Was there any other monies that they
23 awarded that were outside of that total direct
24 costs?

25 A. I believe the Council for Tobacco

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1 Research also provides 15 percent of total
2 direct costs and indirect costs that go to cover
3 administrative expenses, such as maintenance of
4 the grant office, bookkeeping, electricity, et
5 cetera.

6 Q. So it's \$97,640, plus 15 percent of
7 that?

8 A. That's the maximum, 15 percent, I
9 don't recall precisely whether we asked for all
10 of that 15 percent that we were allowed to ask
11 for.

12 Q. So the title of your research was
13 Influence of Nicotine on Neuronal Expression of
14 Acetylcholine Receptors?

15 A. That is correct.

16 Q. And what, if anything, did you publish
17 as a result of that research?

18 A. Well, we'd have to turn to, I don't
19 know exactly. I would have to take a look at
20 each of my publications to see. I try to be very
21 careful about citing who -- what resources were
22 used for a particular publication. I will cite
23 a source of those resources but I believe that
24 many of the articles and abstracts that we
25 published from 1986 or so, through 1988 --

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1 because there's usually a bit of a lag before
2 the papers actually get published at the time of
3 the money to fund that research is available and
4 the work begins, that in many of the papers
5 published from 1986 through '88 or even beyond,
6 with support from that research project.

7 Another complicating issue is that
8 that project was renewed. You look farther down
9 on that page and you'll see the fifth entry is
10 for a renewal on an extension of that grant for
11 another three years. So there are probably
12 articles published well into the nineties that
13 the Council for Tobacco Research supports.

14 Q. Under awarded grants or contracts,
15 that's number four, National Institutes of
16 Health -- no, no, that doesn't say that. That
17 would be under ---

18 A. The next one down.

19 Q. Council for Tobacco Research 1/88 to
20 12/90?

21 A. That's correct.

22 Q. And that's another \$190,460 in direct
23 costs, correct?

24 A. Correct.

25 Q. And that is the same project continued

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1 all the way through December of 1990?

2 A. That's right.

3 Q. So just looking at your abstracts
4 here, are you able to identify which of those
5 pieces of research were done as a result of
6 funding from CTR?

7 A. I don't believe that I can do that
8 with certainty. I would have to, first of all
9 for the abstracts, these are sometimes oral
10 presentations with no written documentation
11 necessary. There's some cases where the
12 abstracts, basically a summary, is published and
13 proceedings of the meeting, for example. I
14 don't know that in every case the abstracts
15 would cite support, but it certainly would be in
16 the publications, the section preceding the
17 abstracts section.

18 In the publications, I would have to
19 look at those. I haven't committed to memory
20 which ones were supported or where we cited CTR
21 support but probably, again, many of those from
22 1986 through the early part of the nineties are
23 likely to have cited support for the Council for
24 Tobacco Research.

25 Q. Now, did any of the research you did

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1 as a result of CTR funding assist the scientific
2 community in discovering what diseases,
3 cigarette smoking does or does not cause?

4 A. No, that's not a focus of my research
5 at all. We have not investigated any issues
6 related to a disease in my laboratory.

7 Q. And certainly nothing is related to
8 disease causation, correct?

9 A. No, we have not studied disease
10 causation in my laboratory.

11 Q. Was tobacco smoke any part of your
12 research?

13 A. No. The large majority of our
14 research, particularly over the last ten or 15
15 years, has concerned cell culture techniques.
16 We're not working with whole animals and we have
17 not worked with smoke at all.

18 Q. Is it possible to do research related
19 to disease causation without working with whole
20 animals?

21 A. I think so. It's -- there, for
22 example, there's someone who is studying in cell
23 culture, some genes, mutations of which cause
24 certain forms of cancer, and to understand what
25 the ramifications to the cell are of having

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1 those mutated genes, that certainly could be
2 done in cell culture.

3 So I think yes, the short answer is
4 yes, it is possible with in vitro studies to
5 investigate phenomena involved in disease.

6 Q. It's just not something you've ever
7 done, correct?

8 A. No, it isn't. There may have been
9 some studies that we were contemplating from
10 time to time looking at growth factor treatments
11 or drugs that might cause tumor cells to stop
12 dividing, but I don't believe that we've ever
13 published those results in a framework where
14 we're trying to understand the disease. It's
15 more as a research tool that we have been using
16 to hatch it, if we can somehow stop a tumor cell
17 from dividing, it is likely that that cell will
18 then differentiate and take on mature
19 characteristics of a normal kind of cell that
20 has now entered into this immortalized state.

21 So we've been doing that with neuronal
22 cell tumors, trying to get those cells to stop
23 dividing so that they'll adopt some more of the
24 characteristics of a mature neuron.

25 Q. But you have not ever done any

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1 research concerning diseases or disease
2 causation, correct?

3 A. That has not been the intent or focus
4 of our research, no.

5 Q. And you haven't done any research
6 about disease prevention either, correct?

7 A. I would have to think about that a
8 little bit. There were some studies where we
9 were --- they aren't immediately related to
10 that. It's a very broad question. It's a very
11 difficult one to answer because one never knows,
12 for example, in a scientific research where
13 information might be gleaned that would be
14 relevant to disease processes or prevention and
15 it's always in the back of our mind that --
16 particularly working in a research institute
17 that's associated with a hospital, always in the
18 back of our mind is, "Well, what can we do to
19 make the quality of life of these patients or
20 other people in society better?"

21 But as to whether a primary focus of
22 our research has been concerning disease and
23 disease processes causation or prevention, no,
24 that has not been the prime motive behind our
25 research.

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1 Q. Can you point me to any research
2 you've done that discusses that at all, whether
3 it's prime, secondary or just trivially
4 mentioned?

5 MR. SHELY: What was the last part?

6 MR. HOAG: Whether it's prime,
7 secondary or trivially mentioned somewhere
8 in the research.

9 A. Ironically some of that was not
10 relating to nicotine receptors at all. There
11 were some studies that Doctor Ben Sheriff and I
12 conducted looking at -- well, something called
13 phosphoinositide metabolism and thought that,
14 and we were interested in how that was affected
15 by drugs and a series of compounds related to
16 Banadat, and our interest in those studies was
17 perhaps a little more immediate in that we were
18 interested in manic depression.

19 Lithium is used to treat that and we
20 thought we had a lead that we pursued and we
21 published the results in a couple of articles, I
22 believe publications number 31 and 32 in our --
23 in my publication list cite those articles.

24 Q. Were either of those ---

25 A. And I've had the opportunity to write

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1 several review articles or overview articles
2 along those lines. We have, we have a little
3 bit more latitude to speculate about areas of
4 research that aren't immediately and squarely in
5 my field of expertise.

6 I have discussed diseases, for
7 example. It's hard to write a review article
8 about nicotinic acetylcholine receptors without
9 mentioning the neurological disease myasthenia
10 gravis, which that disease is caused by
11 mutations that called for nicotine receptors or
12 by a naturally -- by an autoimmune response
13 where the body's immune system incorrectly
14 recognized and attacks its own nicotine
15 receptors in many cells, somehow mistaking them
16 for some sort of foreign substance.

17 So my review articles have discussed
18 issues of disease, and from time to time as
19 well, my expertise is sought by clinicians at
20 the Barrow Neurological Institute.

21 For example, I've published articles
22 on risk factors in Alzheimer's disease and I've
23 done some clinical studies not only in my
24 nicotine receptor research but I also run a
25 clinical and RNAD division at St. Joseph's

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1 Hospital where we run a lot of assays looking at
2 neuromarkers, markers of autoimmune disease and
3 we were running, we had, we have done some
4 clinically relative assays looking at epileptic
5 patients for evidence of some sort of chemical
6 ways to determine whether someone who seems like
7 they might be having seizures is really having
8 seizures or is trying to fool the neurologist
9 into thinking they are having seizures.

10 Q. And out of all those things you've
11 just mentioned, let's back up and start with the
12 one you mentioned on manic depression and
13 lithium.

14 That one wasn't funded by CTR, was it?

15 A. No. I don't believe it was. What
16 happens sometimes in the scientific community
17 though is that if we, with the CTR program as
18 well as many other investors are often given
19 latitude to pursue some hot leads as they wish.

20 Q. You need to slow down because the
21 court reporter is having trouble keeping up with
22 you. She tries to stop you, but you can't hear
23 her because of the phone connection. So let's
24 stop for a second and let her ask you a few
25 questions on things that she needed to clarify.

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1 (Short recess.)

2 BY MR. HOAG:

3 Q. Have you ever done any research where
4 tobacco or cigarette smoking was part of the
5 research?

6 A. No.

7 Q. Have you ever done any research where
8 the effects of cigarette smoking were part of
9 the research?

10 A. No, I haven't. Not smoking per se.

11 Q. How did you decide to submit your
12 grant proposal to the Council for Tobacco
13 Research back in 1985?

14 A. Well, the submission probably occurred
15 in 1984. I probably submitted a pre-proposal to
16 them some time in the late winter or early
17 spring. They invited a full proposal to be
18 submitted probably by the end of May, and the
19 funding for that began then in January of '85
20 and I decided to do that because I was working
21 with nicotine and nicotine receptors.

22 Nicotine is a substance found in
23 tobacco. I thought and hoped the Council might
24 be interested in funding my research, and I knew
25 that research by some other lead investigators

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1 in the field -- including Doctor Abood who we've
2 mentioned before -- had already been funded by
3 the Council.

4 Q. What is your understanding, if you
5 have an understanding, of the mission statement
6 of the Council for Tobacco Research?

7 A. Well, my understanding is, I don't
8 know about the mission statement, I don't know.
9 What are you referring to as the mission
10 statement?

11 Q. A statement of the mission of the
12 Council for Tobacco Research.

13 A. As is presented in the annual reports,
14 the first few pages in the annual reports?

15 Q. What I'm asking you is do you have any
16 understanding of what the mission statement of
17 the Council for Tobacco Research is?

18 A. If you were to ask about the mission,
19 I think I could answer that more easily. A
20 mission statement, I don't know what you're
21 referring to.

22 Q. What is your understanding of the
23 mission of the Council for Tobacco Research?

24 A. My understanding is that the Council
25 has been charged with administering a grant in

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1 the NATO program, principally to allow
2 investigators to conduct research of their own
3 volition regarding tobacco and its constituents
4 on health and disease and to understand basic,
5 basic phenomena involved in a variety of
6 diseases that are associated and have been
7 reported to be associated with tobacco usage, as
8 well as understanding how the constituents of
9 tobacco, such as nicotine, affect the brain and
10 body.

11 My understanding also is that the
12 source of funding for these endeavors comes from
13 the tobacco industry, but also that the Council
14 for Tobacco Research operates -- as do many
15 other research grant giving organizations --
16 through a process of peer reviews involving
17 evaluation by a variety of eminent scientific
18 experts of grant proposals that are submitted to
19 the Council.

20 Q. Is it your understanding that the
21 Council for Tobacco Research is an independent
22 organization, and by that I mean independent of
23 any influence from the tobacco industry?

24 A. That is my understanding and,
25 furthermore, by virtue of the fact that

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1 scientists serve on the Scientific Advisory
2 Board.

3 To my mind that ensures that the
4 scientific process and the peer review process
5 will go forward with the utmost integrity.

6 Q. Is there any part of the Council for
7 Tobacco Research that is independent of
8 influence from the Tobacco Research Institute to
9 your knowledge?

10 A. To my knowledge, it depends on how you
11 define independent, but to my knowledge the
12 activity and the grants, those are done
13 independently of the tobacco companies. I'm
14 sure there are some discussions about how much
15 money the Council will grant and I'm sure
16 there's some interactions with the benefactors,
17 if you will, the tobacco companies in making
18 decisions about how much they are willing to
19 provide to the Council.

20 So I'm certain there is some give and
21 take there, but as far as the scientific to
22 grant an amount program, my understanding is the
23 Council operates with complete anonymity or
24 autonomy rather. Sorry.

25 Q. I understand.

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1 What does the Council for Tobacco
2 Research do other than have a scientific
3 advisory board that decides, makes decisions
4 concerning grants in aid?

5 A. Well, my understanding is that there
6 are some other administrative functions that the
7 Council has conducted, the Council of Tobacco
8 Research, at least some staff members have, but
9 my understanding of the Scientific Advisory
10 Board, for example, is it's involved in the
11 grants in aid program.

12 Q. What are the other activities that you
13 are aware of that CTR has been involved in?

14 A. My understanding is that there has
15 been some contract research that has been
16 administered through Council as well as a
17 program of discretionary funding which I believe
18 is referred to as the special projects.

19 Q. Is it your understanding that that is
20 all part of the Council for Tobacco Research?

21 A. I believe, yes, ultimately the Council
22 for Tobacco Research administers all three
23 programs; they administer the grants in aid
24 program, they administer the contract program as
25 well as the special projects program.

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1 Q. Is it your understanding that the
2 Council for Tobacco Research is independent as
3 to those programs too as far as being
4 independent from influence from the tobacco
5 industry?

6 A. My understanding is that it's a bit
7 more complex. My understanding is that some of
8 those issues are a bit more complex. My
9 understanding is that -- which would you like me
10 to address first? The special projects or the
11 contract group?

12 Q. The special projects.

13 A. My understanding of the special
14 projects is that in some way, and I'm not
15 certain about how all these proposals were
16 initiated, that individuals on the scientific
17 staff at the Council, the research members were
18 contacted by the attorneys for some of the
19 tobacco companies.

20 Those attorneys were suggesting that
21 their Council, asking the Council for advice
22 about the scientific credibility and quality of
23 some grant proposals that the attorneys became
24 aware of and had become aware of, and they asked
25 the Council for Tobacco Research to evaluate the

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1 value of those scientific programs as well as to
2 administer the funding for them.

3 Q. When you say ---

4 A. The funding for those projects that
5 met the criteria through a scientific -- that
6 were judged worthy of funding and that were
7 hence given some support.

8 Q. When you say asked the Council for
9 some advice, who on the Council?

10 Is it your understanding the tobacco
11 industry or tobacco attorneys were asking for
12 advice?

13 A. Staff people of the Council for
14 Tobacco Research.

15 My understanding is that the attorneys
16 would ask members of the CTR staff to evaluate
17 scientific proposals.

18 Q. What members of the CTR staff?

19 A. I'm sorry. I'm not perhaps as well
20 versed as I should be in titles, but the
21 scientific director, I believe, was involved in
22 some of those decisions.

23 Q. The scientific director serves on the
24 Scientific Advisory Board, is that correct?

25 A. I believe he does, yes.

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1 Q. So it's your understanding the
2 scientific director was asked by the tobacco
3 industry lawyers to evaluate scientific projects
4 that the tobacco industry wanted done, is that
5 correct?

6 A. That's right. Projects that the
7 tobacco industry had an interest in.

8 Q. And these aren't the same as the
9 Scientific Advisory Board grants in aid
10 programs, are they?

11 A. Right. My understanding is that for a
12 period of time there were -- those programs ran
13 concurrently as the grants in aid program is
14 running at the same time, over, throughout. But
15 for a period of time, the special projects
16 program was also being administered through the
17 CTR.

18 Q. So in that respect then, the CTR was
19 not independent, is that correct?

20 MR. SHELY: Objection to the form.

21 A. Did you hear that?

22 MR. SHELY: You can go ahead and
23 answer. That was just an objection to the
24 form.

25 A. The Council was not acting independent

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1 of the tobacco companies in that the initiation
2 of their request for funding did not originate
3 with independent investigators, but to my
4 understanding initiated with entities by or at
5 least was mediated through the tobacco industry
6 attorneys.

7 But I believe that the Council for
8 Tobacco Research then acted independently,
9 applying their best scientific judgment to
10 evaluation of the projects to determine whether
11 the projects merited support or not.

12 Q. So as to special projects, it's your
13 understanding that these were funded by the
14 tobacco industry directly to scientists,
15 correct?

16 A. No. That's not my understanding. My
17 understanding is that the funds for those
18 projects were provided by the tobacco industry
19 as was the case for all the funds that went to
20 the grants in aid program, but it didn't go
21 directly from the tobacco industry to the
22 scientists.

23 My understanding is that the monies
24 came through the CTR, the CTR administered those
25 grants as well as rendered opinions about the

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1 scientific value of those proposals.

2 Q. Are you saying that CTR had veto power
3 over what the tobacco industry wanted to fund
4 and the special projects?

5 A. My understanding is that from my
6 understanding, yes, if you put things that way,
7 I think that the CTR, if the staff people at the
8 CTR, the scientific staff thought that a project
9 that was suggested for funding by a tobacco
10 industry attorney was in fact of insufficient
11 scientific merit, then they would say that they
12 would not recommend funding that grant.

13 Q. What about if it didn't have a
14 relationship between tobacco and health? Would
15 that be a reason, too, or not, in your
16 knowledge?

17 A. I don't know that I could answer
18 that. I don't know that I have the information
19 to evaluate -- I don't have information about
20 what the criteria were that were used. But I
21 would say that certainly from my review of the
22 special projects and the kind of research that
23 was funded there, that, if anything, at a time
24 when the grants in aid program went more towards
25 cigarette studies involving molecular

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1 neurobiologic studies, that the special projects
2 were a continuation of the Council's initial
3 emphasis on issues related to tobacco and health
4 and disease.

5 Q. So you're saying that the special
6 projects were the ones that had that direct
7 relationship with tobacco and health as compared
8 to the grants in aid program administered by the
9 independent Scientific Advisory Board, is that
10 correct?

11 A. No, I'm not saying that. I'm not
12 saying they're mutually exclusive. I'm just
13 saying what I said was at a time when the focus
14 -- rightly so, I believe, because it was a trend
15 that occurred across all scientific research
16 agencies, when the funding of the grants in aid
17 were devoted more toward the studies of
18 molecular and biological, the special program
19 continued the tradition, if you will, for the
20 Council of supporting such as epidemiological
21 studies and studies relating to tobacco use,
22 health and disease.

23 Q. So that tradition that was continued
24 was continued through the special projects, is
25 that right?

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1 A. Well, I think there certainly were
2 some grants in aid that addressed those issues
3 but the special projects, in as far as I could
4 tell, had a bit more of an emphasis on those
5 kinds of studies than the molecular and cellular
6 kind.

7 Q. Only a bit more?

8 A. A bit, it's a very loose term. I
9 would say there was more. There was more
10 emphasis in the special projects on research
11 related to tobacco use and issues of health and
12 disease, and I can understand why, too. I think
13 it's a completely irrational thing to do. It
14 was probably difficult. Science is a very
15 trendy thing and getting grants to do science,
16 you really have to be successful at that, you
17 need to keep up with the field.

18 I think at a time when many people
19 were realizing the deficiencies in
20 epidemiological studies or studies with animal
21 models trying to demonstrate on an animal model,
22 trying to develop an animal model for human
23 disease, those were falling out of the favor in
24 the scientific communities. People wanting to
25 give grants for that were few and far between.

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1 I believe the Council stepped in to
2 try to continue those, and it's my evaluation
3 that the special projects were devoted toward
4 continuing support for those kinds of studies
5 that perhaps were more directly related to
6 tobacco issues related to health and disease at
7 a time when those kinds of projects might not
8 have been competitive at other grant giving
9 agencies.

10 (Short recess.)

11 BY MR. HOAG:

12 Q. The special projects as far as your
13 review, what have you reviewed regarding special
14 projects?

15 A. I have looked at, I believe there's an
16 affidavit from Doctor Glenn that contends some
17 summaries about the special projects including
18 journals in which results of projects supported
19 by the special projects program in which those
20 were published, a list of grantees through the
21 special projects program, and a list of all the
22 -- of the project itself and I've seen many,
23 many of the publications that were supported by
24 the special projects.

25 Q. Have you seen the 137 page document

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1 that is titled Special Projects Administered by
2 the Council for Tobacco Research?

3 A. Without having access, I don't know
4 that it was 137 pages. I don't remember that,
5 but I have seen a listing of special projects,
6 yes.

7 Q. Now these special projects, were they
8 grants?

9 A. I believe that you could call them
10 grants, yeah, in that at some point there was a
11 proposal. See, at some point there was a
12 proposal that was proffered and the funds were
13 provided for that research to be done. In a
14 way, I think there is some implication that
15 there was some greater involvement in initiating
16 of those projects or that perhaps, perhaps there
17 were other outs, but I would call them grant
18 projects, yes.

19 Q. Would you also call them research
20 projects?

21 A. Absolutely. They would be called
22 research projects as well. Although there may
23 have been a couple of cases, I think I read
24 something in my review of documents suggesting
25 that there might have been support for a

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1 symposium or for some travel to scientific
2 projects but for the most part, the balance of
3 them, the great majority of them are what I
4 would call research grants for the conducting of
5 research.

6 Q. Do you know whether or not the tobacco
7 industry or any representatives of the tobacco
8 industry ever did what would be equivalent to
9 request for proposals to any scientist or
10 scientific organization?

11 MR. SHELLEY: We couldn't quite hear the
12 end of the question. The question was
13 whether any representatives of the tobacco
14 company did what? Submitted?

15 BY MR. HOAG:

16 Q. Did anything that would be equivalent
17 to making requests for proposals to scientists
18 or scientific organizations?

19 A. I don't believe that I've seen any
20 documents that address that issue.

21 Q. You don't know one way or the other?

22 A. No.

23 Q. Do you know whether or not tobacco
24 industry attorneys or other representatives ever
25 contacted scientists to ask them if they would

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1 do certain research for them?

2 A. I don't know. I certainly could
3 speculate, but I don't know that I want to
4 speculate, but I don't know the details of how
5 the projects were initiated.

6 Q. Do you know whether or not that's ever
7 been done, where the tobacco company, for
8 example, tobacco company attorneys contact the
9 scientists and ask them if they will be involved
10 in conducting certain research?

11 A. No, I don't know if that happened in
12 this case. On the other hand, for example,
13 there are many cases even with the Federal
14 Government for the National Institutes of Health
15 where an RPA or RFP's will be sent out where the
16 grants are rewarded, not contracts, grants are
17 rewarded that in principal are investigator
18 initiated in that the design of the project is
19 rendered by the applicant, but the general
20 context, the general theme, is sematic issues
21 that the agency wishes to address, that that
22 grant must lie somewhere in the domain of those
23 areas of interest to the funding agency.

24 O Okay. Obviously I didn't ask you
25 about what your understanding of what the

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1 government does. What I was asking you was what
2 is your understanding of what the tobacco
3 industry does.

4 Do you know whether the tobacco
5 industry ever makes contact with scientists in
6 one way or another asking them to do specific
7 types of research for them?

8 A. Again, no, I'm not aware. I have not
9 seen any documentation that addresses that. And
10 I simply pointed out that this -- but having
11 RPA's or RFA's is not an unusual kind of
12 practice and the definition of terms, clearly
13 the grants in aid program is purely investigator
14 initiated program.

15 If there's an RFA, how do you define
16 that? Is that initiated by the agency or is it
17 initiated by the investigator in the initial
18 investigation who decides actually what to do,
19 but in broad strokes, the agency asks for people
20 to do research within a specific area.

21 Q. Do you know whether or not the special
22 projects funded by the tobacco industry were in
23 fact controlled by the tobacco industry?

24 A. I have no knowledge of that. I see no
25 evidence that it was.

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1 Q. Have you reviewed any tobacco industry
2 internal documents?

3 A. There may have been a few documents
4 that I have seen in affidavits from Doctor
5 Lasante, for example, but to my recollection, I
6 don't know that they address the special
7 projects program.

8 Q. Who is Doctor Lasante?

9 A. He was a staff member, a scientific
10 staff member at the Council, if my memory is
11 correct.

12 Q. What affidavit of his did you review?

13 A. It was an affidavit filed in one of
14 the cases.

15 May I ask Rodney or Bob if they recall
16 which case that was?

17 Q. Well, if it will help you refresh your
18 recollection to what affidavit it was, you can.

19 MR. SHELY: We didn't hear what you
20 said, that last statement.

21 MR. HOAG: I said if it will help you
22 refresh your recollection as to where the
23 affidavit came from that you reviewed ---

24 MR. OTT: It was an affidavit that was
25 submitted in the Chile's case in Florida.

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1 A. That's right. I remember that. It
2 was the Chile's case.

3 Q. Which is the Florida Attorney
4 General's case?

5 A. That's right.

6 Q. Which currently jury selection is
7 taking place, I believe, in that case.

8 Are you going to be an expert witness
9 in that case or you don't know yet?

10 A. I haven't been asked and I don't know
11 yet.

12 Q. Has your deposition been scheduled in
13 any other case other than Engle?

14 A. There is a scheduled deposition for
15 the Texas Attorney General case.

16 Q. When is that scheduled for?

17 A. Tomorrow.

18 Q. Oh. Same place in Phoenix?

19 A. That's right.

20 Q. Did you bring any documents with you
21 today?

22 A. No, I didn't.

23 Q. What's your understanding of the time
24 frame in which CTR had anything to do with
25 tobacco industry special projects?

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1 A. I haven't committed that period to
2 memory, but I believe it went for about eight
3 years, about 10 years, maybe a little longer
4 than that into the early eighties, and my
5 understanding is that, I think my recollection
6 is about the time that Doctor Glenn became
7 scientific director, the special projects were
8 phased out.

9 Q. So your recollection of the special
10 projects were only in existence for
11 approximately ten years?

12 A. Perhaps a little longer than that as
13 the phase out period may have extended a while
14 longer. That's my understanding though, yes, or
15 at least that's my recollection.

16 Q. And your recollection is based in part
17 on looking at a complete list of special
18 projects administered by the Council for Tobacco
19 Research, is that correct?

20 A. That's right.

21 Q. Do you recollect seeing a special
22 project called Multi Varied Analysis of
23 Longevity Data Techniques, Development of
24 Efficient Clustering Technique?

25 MR. SHELY: Can you say that again,

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1 please? It didn't come across clearly.

2 BY MR. HOAG:

3 Q. It's called Multi Varied Analysis of
4 Longevity Data Comparison of Various Multi
5 Varied Techniques, Development of Efficient
6 Clustering Technique which was initially funded
7 by Council special project in January of 1966.
8 Do you remember having seen that?

9 A. I remember having seen that title. I
10 don't recall who the investigator was. But I do
11 remember seeing that in -- I may have the cases
12 or results that resulted from that project.

13 Q. Do you recall that date, January of
14 1966?

15 A. I haven't committed that to memory,
16 no, but if that's what the document you have
17 indicates, then I'm sure that's correct.

18 Q. So I guess I am confused about your
19 entire recollection because the document I'm
20 looking at is a list of special projects
21 administered by the Council for Tobacco Research
22 and that first date is 1966 and it has dates all
23 the way into the 1990's. So that's not
24 consistent with your recollection of the length
25 of time that the special projects were in

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1 existence?

2 A. Well, my memory is probably not as
3 accurate as the written document, and perhaps
4 I've contracted a period of time in my own mind
5 over which the special projects were funded, so
6 I would certainly rely on what the documents
7 say.

8 Q. How long ago did you review those
9 documents?

10 A. I've been reviewing them over the last
11 two or three months.

12 Q. How many hours have you spent so far
13 in preparation for this deposition or any other
14 tobacco-related deposition for CTR?

15 A. I've probably spent about 50 to 60
16 hours so far working on these cases.

17 Q. And how much is your hourly fee?

18 A.

19

20 **REDACTED**

21 Q.

22

23 A. No, I think I've billed for maybe
24 about 40 hours or so.

25 Q. So there's about 10, 20 more hours

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1 that you haven't yet billed for?

2 A. That's right.

3 Q. How many more hours do you expect to
4 spend preparing for litigation as an expert for
5 CTR?

6 A. Well, as the need arises, it's a
7 little hard to predict that right now, but there
8 certainly are, I certainly do anticipate that as
9 litigation continues, I'll continue to review
10 documents.

11 Q. Let me just briefly make sure-- I'm
12 looking at your curriculum vitae and I want to
13 summarize the funds that you've received or the
14 awards or grants you're received from the
15 Council for Tobacco Research.

16 The first one ran from January of 1985
17 to December of 1987, and that was Influence of
18 Nicotine on Neuronal Expression of Acetylcholine
19 Receptors. Correct?

20 A. That's right.

21 Q. And that was \$97,640 and plus up to an
22 additional 15 percent for administrative costs,
23 correct?

24 A. Correct.

25 Q. And the next one was an extension of

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1 the first one I just read, and it had the same
2 exact title as the one I just read, and that ran
3 from January of 1988 to December of 1990 and the
4 direct costs of \$194,469, is that correct?

5 A. That's correct. Let me clarify. I
6 don't know that you can formally call this an
7 extension. It was a competing renewal
8 application.

9 My proposal went into the mix with all
10 other new proposals and through a process of
11 peer review it was deemed worthy of funding, so
12 it wasn't an extension of that project without
13 another round of peer review. It had a totally
14 independent peer review again.

15 Q. And that total I just read of
16 \$194,469, also an additional maximum of 15
17 percent for administrative costs, is that
18 correct?

19 A. That's correct.

20 Q. And the most recent Council for
21 Tobacco Research funding you've received is for
22 what is called Mechanics of Nicotine Regulation
23 of Nicotonic Receptor Expression?

24 A. That's correct.

25 Q. Which is from July of 1996 and runs

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1 through June of 1999. Correct?

2 A. That's correct.

3 Q. And that's for \$137,064 direct costs
4 with a possible additional 15 percent in
5 administrative costs, correct?

6 A. That's right, and I believe that 15
7 percent should probably compute to the number
8 given there for total costs.

9 Q. You mean in addition to the \$137,064
10 total cost?

11 A. So the total direct cost is one
12 thing. The total cost includes direct and
13 indirect costs.

14 Q. Right, so, for example, if we totaled
15 up the direct cost of \$137,064 and we added in
16 15 percent, it would be another, approximately
17 another \$20,000?

18 A. Right.

19 Q. So total costs would be somewhere
20 around \$157,000?

21 A. That's correct.

22 Q. And that's for the project that was
23 recently funded that runs through June of 1999,
24 correct?

25 A. That's correct.

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1 Q. Do you have any other applications for
2 funding in process with CTR funding?

3 A. No, I don't.

4 Q. Now when it says in here that it's
5 funded from July of '96 to June of 1999, the
6 total cost, it's a cumulative total cost, it
7 isn't a yearly cost that's listed here at
8 \$137,064 is that correct?

9 A. No. That's not an annual cost.
10 That's the total cost of the duration of the
11 grant.

12 Q. Okay. Now the Council for Tobacco
13 Research has a board of directors that is
14 comprised of members of the tobacco industry,
15 correct?

16 A. That is my understanding, yes.

17 Q. And those members of the tobacco
18 industry that are on the Board of Directors,
19 they select the CEO of the organization,
20 correct?

21 A. I'm not certain about that. But, that
22 would seem like a plausible procedure.

23 Q. You don't know? What was that?

24 MR. SHELLEY: I think the question was
25 you don't know?

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1 A. No, I don't know precisely. I said I
2 don't know but it sounds like it's a plausible
3 procedure.

4 Q. So Doctor James Glenn, you don't know
5 whether or not he was hired by the board of
6 directors comprised of tobacco industry
7 representatives or not, correct?

8 A. Right. I don't know the internal --
9 I'm not -- I'm not sure what the policies and
10 procedures are for hiring of a scientific
11 director.

12 Q. Is that your understanding of the
13 title for Doctor James Glenn?

14 A. I believe so, yes.

15 Q. Does he have any other titles that
16 you're aware of?

17 A. I know he's a distinguished physician
18 and scholar so I'm sure he has other titles as
19 well.

20 Q. Does he have any other titles with CTR
21 that you're aware of?

22 A. Not that I recall.

23 Q. Do you know whether or not he has any
24 other ties to the tobacco industry other than
25 being an official with CTR?

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1 A. Not that I am aware of, and that's
2 based on review of affidavits that he has
3 submitted that I have had the opportunity to
4 review.

5 Q. Based on affidavits that he's
6 submitted, do you know whether or not he is a
7 tobacco farmer?

8 A. No, I don't recall reading anything
9 about that.

10 Q. Does he own a tobacco farm?

11 A. He may have -- I think he has a farm
12 in Kentucky. I may remember something about
13 that. My understanding, I seem to recall that
14 he's maybe involved in horse raising or breeding
15 of horses.

16 I'm not certain, though.

17 Q. But you don't have any recollection of
18 him being involved in tobacco farming, is that
19 correct?

20 A. But I do have a recollection that he
21 does have a farm, that I think that he -- I
22 think I read that he does have some sort of
23 enterprise in Kentucky and I believe, I
24 extrapolated I guess that it involves horse
25 breeding or horse raising of some kind.

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1 Q. Now, if he in fact owns a tobacco
2 farm, would that in your opinion be in any type
3 of conflict of interest with his position with
4 CTR?

5 A. No, not necessarily.

6 Q. Is that an equivocal no or an
7 unequivocal no? You said not necessarily.

8 A. No, not necessarily. You know, it's
9 an issue of the integrity of the person.

10 Q. So you know what I mean when I say
11 conflict of interest, right?

12 A. Well, could you clarify?

13 Q. What's your understanding of the term
14 conflict of interest?

15 A. It could take many forums and I'm not
16 certain what you're asking.

17 Q. Do you have a definition of conflict
18 of interest?

19 A. Well, I imagine that, first of all,
20 there are cases where there might appear to be a
21 conflict of interest where someone has the
22 integrity so that there is, in fact, not a
23 conflict of interest, so -- but whether it's
24 theoretical or an actual conflict I think is
25 something that really has to be addressed on a

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1 case by case basis.

2 Q. Is it possible for the Council for
3 Tobacco Research to do research that would be
4 harmful to the tobacco industry?

5 A. The Council for Tobacco Research
6 doesn't do research.

7 Q. Is it possible for the Council for
8 Tobacco Research to fund research that would be
9 harmful to the tobacco industry?

10 A. I think it certainly is possible.

11 Q. So would a person who has a vested
12 interest in the economic well-being of the
13 tobacco industry have any conflict if that
14 person was in a position, such as the position
15 that Doctor James Glenn is in?

16 MR. SHELLEY: Objection to the form.
17 Lack of foundation. Lack of circumstances
18 that would allow this witness to answer.
19 Lack of hypothetical.

20 BY MR. HOAG:

21 Q. You can answer now.

22 A. I don't know that Doctor Glenn has an
23 interest in tobacco. But, furthermore, I think
24 that in his position and given his credentials,
25 I have no reason to believe that he would be

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1 able, that he would not be able to separate
2 himself from his duties or responsibilities as a
3 Scientific Advisory Board member for a
4 not-for-profit grant giving organization from
5 his own personal interest or holdings.

6 Was I clear enough about that?

7 Q. Are there any circumstances under
8 which you would think it would be a conflict of
9 interest for Doctor James Glenn to have an
10 economic interest in the tobacco industry and
11 hold his position with CTR?

12 MR. SHELY: Objection. Calls for
13 speculation.

14 A. Well, again, I don't know Doctor
15 Glenn's personal circumstances at all. My
16 review of documents he submitted suggest to me
17 that he's a very prominent individual with high
18 integrity and I would have no reason at all to
19 believe that anything outside of, anything
20 outside of his functions as a scientific
21 director would influence his actions as
22 scientific director with the CTR.

23 Q. But you reviewed no documents that he
24 submitted that indicated that he was the owner
25 of a tobacco farm, is that correct?

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1 A. Again, I don't recall seeing that in
2 the documents that I have reviewed, any
3 indication that he owns a tobacco farm.

4 Q. Well, do you think he would have a
5 duty to disclose that in any public document
6 regarding his position with CTR?

7 MR. SHELLEY: Objection. Calls for an
8 opinion and the man is clearly not
9 qualified to offer it. No foundation.

10 A. That's a legal issue and I'm not an
11 attorney. I don't know that I can answer that.

12 Q. I thought that one of the things you
13 were going to talk about was the integrity of
14 the scientific research funded by CTR.

15 A. Yes, it is, and the basis for that,
16 there are many different bases on which I would
17 render my expert opinion as someone who has
18 gotten and has gotten grants and played a role
19 in deciding who might get grants from other
20 agencies.

21 Q. Well, are there any disclosure
22 requirements when someone is funded by CTR that
23 you're aware of?

24 A. Disclosure requirements on the part of
25 who?

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1 Q. The person doing the research and
2 publishing it?

3 A. No, from my involvement as a grantee
4 for the Council of Tobacco Research, that
5 organization operates as does any other grant
6 giving organization. I've never had anyone ask
7 about conflicts in interest there.

8 I know that conflicts of interest or
9 disclosure statements -- I know in my institute,
10 and this is something that has come up in the
11 National Institutes of Health and Federal
12 Regulations ---

13 Q. Excuse me, you're not understanding my
14 question. What my question is about is
15 disclosure, and let me be very specific so as
16 not to confuse you.

17 Are people who receive CTR funding
18 required to disclose the fact that they received
19 CTR funding on research that they publish?

20 A. I don't know that it's a requirement.
21 It is a common practice. I think anyone who has
22 been awarded a grant or proposal should be and
23 usually is pretty grateful for the support that
24 allows them to conduct their research, and so
25 the common practice is to cite the Council for

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1 Tobacco Reserve as a source of funding in
2 instances that that support can be legitimately
3 tied to the research that was conducted.

4 I know that from my interactions from
5 the Council, they ask for us to send in copies.
6 I think they ask us to -- I don't know that they
7 demand, they ask us to cite them as a source for
8 support and they also ask us to send them copies
9 of their publications so they can simulate them
10 in annual articles and reports and any other
11 reports that they need to construct.

12 Q. Were the special projects at CTR for a
13 CTR program?

14 A. I'm sorry. Could you repeat the
15 question? You asked whether the special
16 projects was a CTR program?

17 Q. Yes.

18 A. Yes, it's my understanding that it
19 was, yes.

20 Q. What do you base that understanding
21 on?

22 A. Well, that all the documents that I've
23 seen about the special projects have been
24 documents prepared through the Council of
25 Tobacco Research and that the CTR was involved,

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1 as I mentioned previously, in making scientific
2 decision about the value of those proposals for
3 special project funding as well as administering
4 the distribution of funds.

5 Q. Is the word grants and grants in aid,
6 are those synonymous, same thing?

7 A. Yes, we can use those interchangeably.

8 Q. When it's referred to funding for
9 research, is that the way they're commonly
10 used? Grants or grants in aid, they mean the
11 same thing?

12 A. I believe so, yes. I think that's a
13 common practice.

14 Q. When the special projects were in
15 existence at CTR, was CTR completely autonomous
16 in its programs of grants in aid in contracts
17 for research with institutions and laboratories?

18 A. The grants in aid in so far as it was
19 the investigator initiated kind that was
20 administered through the Scientific Advisory
21 Board, yes, I believe there was full
22 independence of, in operation of that research
23 program, yes.

24 Q. That wasn't what I asked. I said when
25 the special projects were still in existence --

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1 shall I repeat the whole question?

2 A. All right.

3 Q. And I understand you're saying as far
4 as the Scientific Advisory Board's grants in aid
5 that were provided, your answer was yes, they
6 were independent.

7 As far as the special projects were
8 concerned, was CTR completely autonomous in its
9 programs of grant in aid in contracts with
10 research with institutes and laboratories?

11 A. I think we've already discussed this.
12 Would you like me to reiterate?

13 Q. I would like you to answer my
14 question.

15 MR. SHELY: I think he already did but
16 he'll be happy to do it again.

17 A. Okay. Again, my understanding of the
18 process that was presented to the -- probably
19 the Scientific Advisory Board or some person at
20 the Council for Tobacco Research were projects
21 that attorneys for the tobacco companies were
22 interested in. They asked the Council staff
23 people to evaluate the scientific merit of those
24 proposals.

25 My understanding is that if the

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1 Council felt there was adequate scientific
2 merit, then that funding would be found for
3 those projects and the Council would administer
4 the giving of that money and manage the
5 administrative issues related to operating that
6 special projects program.

7 So the extent to which the scientific
8 judgments were made independently, I think yes,
9 scientific judgments were made independently but
10 I don't think that you could characterize this
11 as an entirely independent process in that there
12 was more interaction between Council staff
13 people and tobacco industry personnel than would
14 have occurred for the grants in aid program
15 through which grants were reviewed via peer
16 review by the Scientific Advisory Board.

17 Q. So CTR as far as special projects were
18 concerned, was not completely autonomous,
19 correct?

20 A. The scientific evaluation I think was
21 carried out with integrity and independence, but
22 because of somewhere along the line, the tobacco
23 industry attorneys seem to have been involved in
24 bringing projects to the attention of the CTR
25 and I don't think you could characterize that

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1 part of the process as being independent of the
2 tobacco industry at all.

3 And ---

4 Q. Yes, go ahead.

5 A. I was going to say maybe to go back
6 and clarify, grants in aid versus grants. Maybe
7 just so that we can be more precise, how about
8 if I call the grants in aid program the program
9 that was administered through the Scientific
10 Advisory Board, but the grants would be a
11 broader term that would cover the Scientific
12 Advisory Board, reviewed projects as well as the
13 special projects which were grants given to
14 investigators for research of their own design.

15 Q. What did you mean, how about if you
16 say that?

17 A. I'm just asking, if you agree as far
18 as that, that would be a terminology that we
19 might use from here forward.

20 Q. You can answer the questions that I
21 ask you any way you want to. I didn't have any
22 question pending right there so I'm not even
23 sure at all what you are getting at, but ---

24 MR. SHELY: He started to speak and I
25 was going to tell him there was no question

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1 pending and he decided to continue, so that
2 was the question.

3 MR. HOAG: Right. No, he said what he
4 said but it's not in response to any
5 question that I asked.

6 MR. SHELY: It was in response, I
7 didn't get a chance to go ahead and jump in
8 and say there was no question pending
9 before you invited him to answer.

10 MR. HOAG: As far as your last comment
11 which wasn't in response to any question,
12 I'll just move to strike as unresponsive.

13 MR. SHELY: I'm going to impose the
14 motion on the grounds I just stated.

15 BY MR. HOAG:

16 Q. As far as the special projects were
17 concerned, did CTR work with the guidance of
18 twelve independent scientists in reviewing those
19 special projects?

20 A. Not to my understanding.

21 Q. Do you know whether or not researchers
22 who received special projects were required to
23 disclose on the research that it was funded
24 through a CTR funded special project?

25 A. I'm not certain whether they were

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1 required to or simply asked to, but in my review
2 of the documents, it included many of the
3 publications derived from the special projects,
4 it became clear that the great majority of those
5 certainly made reference to the special projects
6 program.

7 Q. When did you first become aware of CTR
8 special projects?

9 A. Knowledgeably aware, I would have to
10 say in the course of reviewing documents
11 regarding these cases, but in actuality, it jogs
12 my memory that there was some time, there were a
13 couple of occasions when in reviewing the
14 scientific literature, I came across articles
15 that were published that cited Council for
16 Tobacco Research special projects and I do
17 remember saying, that, I wonder what that is,
18 but it's not something I ever followed up since
19 then and again, until reviewing documents for
20 this deposition.

21 Q. So the first time you had any
22 understanding of what a CTR special project was
23 was when you started to prepare for this
24 deposition and others for CTR, is that correct?

25 A. That's right, but I do recall noticing

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1 that the, not the disclaimer but the
2 acknowledgment of special projects reports on a
3 few publications over the years.

4 Q. Have you ever heard of a Doctor
5 Theodor -- it's Ph.D., Doctor Theodor D.
6 Sterling?

7 A. Yes. The name is familiar. I don't
8 recall precisely the context, whether Doctor
9 Sterling was a Scientific Advisory board member
10 or a grantee. I don't recall, but I have seen
11 that name.

12 Q. Well, this might refresh your
13 recollection.

14 On the document that's the list of
15 special projects administered by the Council for
16 Tobacco Research, his name appears on special
17 project number 71 which is dated from September
18 1st, 1973 to March 31, 1990, and it goes on from
19 page 47 all the way to page 62 listing research
20 projects that fell within that special project
21 number 71.

22 Does that refresh your recollection at
23 all as to who Doctor ---

24 A. I remember looking at those entries.

25 Q. Do you remember whether or not you

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1 looked up any of the research that was published
2 by Doctor Sterling?

3 A. I'm sure that I have looked at a
4 couple of those publications, but at the moment
5 I don't remember the precise content of those
6 reports.

7 Q. Do you remember seeing or reading the
8 title of an article by Sterling that was called
9 Indirect Health Effects of Relative Humidity in
10 Indoor Environments?

11 A. I do remember seeing that title,
12 reading that title, yes.

13 Q. Did you have occasion to look up that
14 article?

15 A. I think that's one of the ones that I
16 glanced through or at least read the abstract.
17 If I'm not mistaken, it's a, I think a study,
18 now that you're refreshing my memory.

19 . There were a series of studies that
20 Doctor Sterling conducted concerning
21 environmental air quality in specific
22 environments.

23 Q. What specifically did he -- what was
24 the research that he did for Indirect Health
25 Effects of Relative Humidity in Indoor

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1 Environments?

2 A. What was the research? I really
3 didn't hear you. Could you repeat?

4 Q. What do you recollect about the
5 abstract for Indirect Health Effects of Relative
6 Humidity in Indoor Environments?

7 A. I'm afraid that I don't remember the
8 details of that article or the abstract.

9 Q. What, if anything, does the relative
10 humidity in indoor environments have to do with
11 the health effects of tobacco smoke?

12 MR. SHELY: Objection, foundation.

13 You can answer.

14 A. That's an area of investigation that's
15 outside my area of expertise, so I don't know
16 that I'm really qualified to render a judgment
17 about that.

18 Q. Is it your understanding that this was
19 one piece of research that Doctor Sterling was
20 funded to do as a special project?

21 A. Well, again, I can conjecture and
22 speculate. Just by looking at the long list of
23 projects and publications, it seems to me that
24 the general theme of his research was air
25 quality and environmental air quality.

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1 But that's, I think that's the extent
2 of my understanding of his work.

3 Q. Is it your understanding that those
4 projects were funded as CTR special projects?

5 A. Yes, I think that's evident from the
6 fact that there's publications which were
7 included in the list of special projects and I
8 would imagine, but I'm not certain, that Doctor
9 Sterling would have cited the CTR special
10 projects as having supported the work.

11 Q. But if one were to be, well, I'm not
12 saying Doctor Sterling, but if the tobacco
13 industry who have been completely straight
14 forward about it, they would have just said it
15 was funded by the tobacco industry, wouldn't
16 they?

17 MR. SHELY: Objection to the form. Go
18 ahead and answer.

19 A. I don't know about that. I think it's
20 legitimate to say it was funded by the tobacco
21 research and special programs, and if I had the
22 inclination, I'm sure I could have made a phone
23 call the first time I saw the special projects
24 acknowledgment, I could have made a phone call
25 to find out more details about that program and

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1 who funded it.

2 But, you know, to answer your
3 question, I don't know that that is something
4 that would be necessary to indicate that it was
5 funded by the tobacco industry.

6 Q. You know that the tobacco industry
7 publicly states that CTR is completely
8 autonomous, correct?

9 A. I think -- I don't know the precise
10 wording of any of the public reports of that,
11 but I think that in general terms, I think that
12 that is the intent and I think certainly the CTR
13 does, particularly through the Scientific
14 Advisory Board, does act with autonomy.

15 Q. My question is, do you know whether or
16 not the tobacco industry publicly states and has
17 consistently publicly stated that the Council
18 for Tobacco Research is completely autonomous?

19 MR. SHELY: What was the last word on
20 that, John?

21 MR. HOAG: Is completely autonomous,
22 that was the last three words.

23 MR. SHELY: My objection is asked and
24 answered. I think he answered it last
25 time. If you want him to state it again,

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1 he will.

2 A. You know, taking, you know, those
3 kinds of statements often are held in context.
4 I don't know the context of the public reports
5 or publisher to which you are making reference,
6 but my understanding is that the Council for
7 Tobacco Research does operate with complete
8 independence in handing out and administering
9 their grants in aid program as we discussed
10 already.

11 Q. But not with regard to special
12 projects?

13 A. Well, again, the issue of -- I think
14 we have addressed this before as well, and that
15 is that if there is any tobacco industry
16 involvement, it is that it's somewhere along the
17 line attorneys from the tobacco companies have
18 made suggestions to the CTR that some research
19 projects might be worthy of funding.

20 Q. It's a totally different process than
21 the Scientific Advisory Board process, correct?

22 A. Well, it's a different process but I
23 don't know that it's totally different because
24 once the funds are in the hands of the
25 investigator, my understanding is that the

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1 investigators have complete freedom to pursue
2 whatever line of study they wish and to publish
3 their results, no matter what they are, in
4 journals of their own choosing and in forums of
5 they're own choosing.

6 Q. And how did you come to that
7 understanding?

8 A. I came to that understanding from
9 looking at the list of projects, the journals in
10 which those projects, the special projects
11 reports were published, the listing of the
12 investigators and the prominent institutions
13 with which they have had affiliations.

14 The fact that the reports were
15 published and to me, before I even knew about
16 the special projects, there's the relationship
17 between grants that were funded by the special
18 projects or grants that were funded through the
19 grants in aid program administered under the
20 auspices of the Scientific Advisory Board were
21 entirely seamless.

22 I could see no difference in reports
23 by either the special projects or the grant in
24 aid program.

25 Q. So then one would be lead to believe

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1 that CTR was completely autonomous, is that
2 correct?

3 MR. SHELY: Objection. Calls for
4 speculation. Incomplete hypothetical.

5 A. I think I answered already about, you
6 know, the relationship between the CTR and it's
7 autonomy with regard to special projects and
8 with regard to the grant in aid program.

9 I think the main point here, the
10 critical issue is that ultimately the scientific
11 research was done according to investigator
12 design and all the scientists who had -- who
13 conducted research under the auspices -- the CTR
14 funded a special project, all of that research
15 was published fully at the discretion of the
16 scientist who conducted the research.

17 So that's where you have the autonomy,
18 that's where you have the independence, that's
19 where ultimately the proof is in the pudding,
20 that getting things published and then looking
21 back historically at those publications, their
22 value is not judged at a given point in time,
23 but often is judged retroactively when it comes
24 to scientific research when we don't always
25 appreciate what the immediate impact of what

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1 those research projects will be in the long run.

2 Q. Is it possible to do good research
3 that has absolutely nothing to do with tobacco
4 and health?

5 A. Of course. I think there's a lot of
6 research being done around the country that has
7 absolutely nothing to do with tobacco and
8 health.

9 Q. There were a lot of special projects
10 that had absolutely nothing to do with tobacco
11 and health too, correct?

12 A. Oh, I don't know that I would say
13 that. Often it's just as difficult to judge
14 contemporaneously the impact and the importance
15 of scientific work on the date that it's
16 published, it's difficult to judge the relevance
17 in the long run eventually of some research
18 projects, funded or not, to tobacco health and
19 disease. We don't have the benefit of being
20 omnipotent and having a hindsight on a lot of
21 these issues.

22 Q. Well, you do know that the special
23 projects were initiated through requests from
24 tobacco industry attorneys, correct?

25 A. That's my understanding, that at least

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1 some of them were, yes.

2 Q. And you know they were initiated for
3 the purpose of defending the tobacco industry
4 against lawsuits, correct?

5 A. I don't know that that's the case. I
6 have not seen anything that would indicate that.

7 Q. Well, you really haven't reviewed the
8 tobacco industries' internal documents, have
9 you?

10 A. No, I haven't. But, on the other
11 hand, I think it's possible to think that to
12 come up with a conspiracy theory that would say
13 the tobacco industry is trying to guide
14 research, but what I would state is, and assert
15 is that once the research is in the hand of the
16 scientists, the scientists will follow their
17 notes. They will follow their rules, they'll
18 publish findings. The integrity of the
19 scientific process, I hope is, integrity, is as
20 good as it can be.

21 I see no reason to think that
22 scientists would be swayed by intent in any way
23 that scientists would be aware of or be swayed
24 by any conjecture that there might be some back
25 room meetings trying to direct research. Once

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1 it's in the scientists' hands, all bets are
2 off. The scientists are going to conduct their
3 research, get their results and they're going to
4 publish them, and ultimately nature is the
5 arbiter as to whether their results are valid
6 and correct or not.

7 Q. Well, if I, as a tobacco industry
8 attorney tell you I want you to do research, I
9 would like you to do independent research on the
10 indirect health effects of relative humidity in
11 indoor environment, why would I care that you're
12 going to publish that research? It's not going
13 to hurt the tobacco industry, is it?

14 MR. SHELLEY: Objection. Lacks
15 foundation. Makes assumptions not in the
16 record. Incomplete hypothetical.

17 Go ahead and answer.

18 A. Well, I can see where there -- I can
19 see where there would be an interest, maybe a
20 tobacco company would have an interest in what
21 elements of indoor air quality are factors in
22 making assessments of -- I can imagine -- let me
23 start again.

24 I can imagine a scenario where out of
25 complete innocence and ambivalence, that the

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1 tobacco industry was truly interested in what
2 the effects of tobacco smoke in an environmental
3 -- indoor environment would have had on the
4 health industry, but before that research can be
5 well designed, well constructed, properly
6 interpreted, there are many, many other elements
7 to indoor air quality that can influence the
8 results, and I can see perfectly well where a
9 study by Doctor Sterling on effects of humidity
10 on some of those factors would be quite relevant
11 to how indoor air quality, how humidity might
12 interplay with smoke in the air, in depositions
13 in particular.

14 So I don't know that we can, I have no
15 basis to read into what the motives were. All I
16 can say is that science -- I think that the
17 science will be conducted with full integrity
18 and I'm also saying that things are complex and
19 that there are many ways in which something that
20 seems to have no relevance at all to tobacco
21 health and disease to a lay person or even to an
22 attorney or even to an educated scientist, there
23 are times when we can't even understand that and
24 there are examples that I can give to you from
25 my review of literature published by scientists

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1 funded by the CTR.

2 Q. Wouldn't it have been a better title
3 for the Council to be called the Council for
4 Anything But Tobacco Research?

5 MR. SHELBY: Objection. Argumentative.
6 I'm not going to allow him to answer that
7 question.

8 MR. HOAG: You're not letting him
9 answer the question?

10 MR. SHELBY: I'll let him answer it. I
11 retract it. I will let him answer with the
12 same note of sarcasm in which he wants to.
13 Answer it, please. Answer that, Doctor.

14 A. I think that's a pretty silly
15 questions because I think there is no question
16 that across the spectrum of research funded by
17 the Council for Tobacco Research, that the
18 density of research projects devoted to tobacco
19 and issues related to nicotine and diseases in
20 which tobacco has been suspected as being
21 involved or associated, there is no question in
22 my mind that the Council for Tobacco Research,
23 pound for pound, founded more research than any
24 other agency in the country.

25 Q. Is there any question in your mind

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1 that CTR was influenced by tobacco industry
2 attorneys?

3 MR. SHELLEY: Objection. Asked and
4 answered several times.

5 A. Again, I think we've gone through
6 already the relationship between tobacco -- my
7 understanding of the relationship of tobacco
8 industry lawyers and the Council for Tobacco
9 Research. So I don't know if there's any more I
10 can add to that.

11 Q. Do you know how much money Doctor
12 Sterling received for doing CTR special
13 projects?

14 A. I don't recall that figure. I will
15 use the term RAM, random access memory. It's
16 not in high RAM but I would imagine it was a
17 considerable amount of money.

18 Q. Does the figure four point seven
19 million dollars refresh your recollection?

20 A. That probably is not an inordinate
21 amount for projects that had the duration that
22 you indicated before and for research that is as
23 complex as looking at environmental air quality.

24 Q. Do you know whether or not the tobacco
25 industry used research of Doctor Sterling to

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1 defend themselves against lawsuits?

2 A. No, I don't. I have no basis to make,
3 to have an opinion on that.

4 Q. Do you know whether or not
5 environmental tobacco smoke causes any disease?

6 A. Not to my knowledge, it does not.
7 That's outside my field of expertise, though.
8 I'm not an expert in disease and certainly not
9 an expert in environmental air quality.

10 Q. Do you know any of the other people
11 who work on the CTR staff other than Doctor
12 Glenn, the name of any other people?

13 A. Yes. Over the years in my
14 interactions as a grantee, I've gotten to know
15 several of the associate directors. I don't
16 recall the precise titles now. They have
17 probably changed over the years but among the
18 individuals who have been my contact person,
19 contact person is a person at CTR on the staff
20 who interacts with the grantee and answers
21 questions about administration of the finances
22 or about their research project and from time to
23 time someone from the staff, usually the contact
24 person, will make a site visit to the grant to
25 have on-site discussions with the funded

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1 investigator about the research program as well
2 as a wide range of scientific issues.

3 In my course of interactions with
4 scientific advisors, I have gotten to know
5 Doctor George Hashish who is currently the high
6 contact. I've also met Doctor Arthur Eisenberg
7 at a meeting of the New York Academy of Sciences
8 sometime a few years ago, and I got to know
9 Doctor Donald Ford who is a member of CTR.

10 As it turns out, Doctor Ford was one
11 of my professors when I was in graduate school
12 when he was a professor of anatomy at State
13 University of New York Health Sciences Center in
14 Brooklyn.

15 Q. It's your understanding that Doctor
16 Glenn is the scientific director?

17 A. That's my understanding, yes.

18 Q. Is that a full-time job?

19 A. I'm not certain. I don't have the
20 knowledge to base an opinion, to express an
21 opinion about that.

22 Q. Do you know whether there's enough
23 work for that person to do to be a full-time, 40
24 hour a week job?

25 A. I can imagine it would. I think

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1 individuals would have, or who hold similar
2 positions at other funding agencies are employed
3 full-time.

4 Q. Do you know whether or not Doctor
5 Glenn is employed full-time?

6 MR. SHELY: Asked and answered.

7 A. No, I don't.

8 Q. Do you know what Doctor Glenn's
9 permanent residence is?

10 A. There may have been something about
11 that in his affidavit and his CV, but I don't
12 recall the precise details.

13 Q. Do you know where CTR is located,
14 headquartered?

15 A. Yes, the Council for Tobacco Research
16 is somewhere in Manhattan, in New York State.

17 Q. Do you know what Doctor Glenn's annual
18 compensation for his employment with CTR is?

19 A. No, I don't.

20 Q. Do you know whether or not Doctor
21 Glenn owns any stock or shares of stock in
22 tobacco companies?

23 A. No, I don't.

24 Q. Does it matter to you?

25 A. Again, it comes to an issue of

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1 personal integrity and I have no reason to
2 believe that it should matter.

3 Q. If research that CTR did would cause
4 the price of tobacco stock to go down, would it
5 make any difference whether a person running CTR
6 owns shares of stock in tobacco companies?

7 MR. SHELY: Let me object because you
8 keep referring that CTR does and I
9 think ---

10 BY MR. HOAG:

11 Q. The research that CTR funds, I'm
12 sorry.

13 A. So the question again is that if
14 research that CTR funds would cause tobacco
15 funds to go down -- could you complete that for
16 me?

17 Q. Doesn't that mean that a person who
18 runs CTR should not be in a position where they
19 have to worry about whether their own shares of
20 stock are going to increase or decrease in value
21 based on research that is done at CTR?

22 MR. SHELY: Let me object first
23 because you said research done by CTR, but
24 it's an incomplete hypothetical of facts
25 not in the record and outside of Doctor --

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1 this witness's expertise.

2 BY MR. HOAG:

3 Q. Research funded by CTR. Put in the
4 word funded instead of done.

5 A. I would think that it is the norm.
6 That even if it was the case if someone had the
7 duties or responsibility of Scientific Advisory
8 Board, a member or a scientific director for an
9 organization, not-for-profit organization like
10 the Council for Tobacco Research, call me naive,
11 but I would assume these people would conduct
12 themselves with utmost integrity and that they
13 would not, their private holdings in stocks
14 would have no bearing on how they would function
15 professionally.

16 Q. Regardless of the financial
17 consequences to them, is that correct?

18 MR. SHELY: Same objection.

19 BY MR. HOAG:

20 Q. Is that correct?

21 A. I believe I've answered that already.
22 Again, these people I would, I may be an
23 idealist, but I do assume people will conduct
24 themselves professionally.

25 Q. So, is there any reason for CTR to

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1 have an independent Scientific Advisory board?

2 MR. SHELY: Could you restate that?

3 BY MR. HOAG:

4 Q. Is there any reason for CTR to have a
5 Scientific Advisory Board, an independent
6 Scientific Advisory Board versus just doing
7 special projects through CTR that are funded by
8 the tobacco industry?

9 A. I think so. As a not-for-profit
10 organization that funds biomedical research, it
11 is common practice to have Scientific Advisory
12 board and peer review process is, for better or
13 worse, the state of the art process for
14 distributing grant funds privately or publicly
15 in this country and across the world, so I think
16 that process is well within the realm and the
17 norm for grant giving organizations such as the
18 CTR.

19 Q. So that special projects are outside
20 of the norm, correct?

21 MR. SHELY: Objection to the form.

22 Misstates testimony.

23 A. No. As I mentioned before, there's a
24 lot of issues there, again, running all the way
25 to who has the ultimate responsibility for

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1 publishing the results and did they do that
2 independently, and the special projects as a
3 form of giving grants out to people to conduct
4 research, and in the case of the CTR related to
5 tobacco use, health and disease is also within
6 the norm within the realm of operations of grant
7 giving agencies. It's often the case that there
8 are things that RFA's, request for applications
9 where agencies look around at its portfolio to
10 balance its program, areas of research it is
11 interested in by seeking people who are experts
12 to conduct research in particular areas,
13 particularly of those areas of research that
14 might not be in fashion in the -- and
15 competitive in an open peer review competition.

16 Q. Do you plan on requesting funding for
17 any other projects that you may have through
18 CTR?

19 A. Well, at the moment I'm not -- I don't
20 plan that far ahead. If it is still in
21 existence and if our research is in an area
22 where I think we have a chance to get funding
23 from them because it's an area of interest to
24 them as well, I certainly would take advantage
25 of that opportunity.

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1 It's very difficult these days to get
2 research funding. There isn't a lot around and
3 scientists, you know, serve themselves as they
4 search for impossible sources for research, for
5 funding for their research.

6 Q. Do tobacco companies market their
7 products to children?

8 MR. SHELY: Objection. That's way
9 outside the scope.

10 BY MR. HOAG:

11 Q. You can answer it.

12 A. I don't know that I'm qualified to
13 address that, that question.

14 Q. So your answer is you're not qualified
15 to answer?

16 A. Right.

17 Q. Have you ever seen the Joe Camel
18 billboards?

19 A. Yes, I have.

20 Q. Do those appeal to children?

21 MR. SHELY: Same objection. Outside
22 the scope.

23 A. I'm not certain. I'm not a child but
24 I have seen adults wearing Joe Camel t-shirts,
25 so I would imagine that it does have some appeal

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1 to some adults.

2 Q. Have you seen any adolescents wearing
3 Joe Camel t-shirts?

4 A. I don't believe that I have, no.

5 Q. But you've seen adults?

6 MR. SHELY: Say that again, please.

7 BY MR. HOAG:

8 Q. You've seen adults wearing Joe Camel
9 t-shirts but you've never seen any adolescents
10 wearing Joe Camel t-shirts, is that correct?

11 A. That's correct.

12 Q. Do you know what Camel gear is?

13 MR. SHELY: Say that again.

14 BY MR. HOAG:

15 Q. Do you know what Camel gear is?

16 A. Camel year?

17 Q. Camel gear.

18 A. Gear, it's probably clothes and things
19 like that, packs or gunnysacks that are sold. I
20 don't know, I haven't really looked at any so
21 I'm not sure what, but I know like Pepsi gear or
22 Coke gear, I know there are some producers of
23 consumer products that will award points or
24 things like that for purchases toward free or
25 price saving discounts for clothing or

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1 accessories.

2 Q. Are you aware of whether or not Camel
3 Cigarette Company or brand offers such
4 promotions?

5 A. I really -- I'm sorry, I haven't
6 really paid attention to that. I think I
7 wouldn't be surprised if they did.

8 Q. Do you know whether Marlboro offers
9 such promotions?

10 A. I wouldn't be surprised if they did
11 but I'm not -- that's not something that I paid
12 attention to.

13 Q. Have you ever seen Marlboro
14 billboards?

15 A. Yes.

16 Q. What's depicted on those billboards?

17 A. Usually a cowboy, the image of a
18 cowboy.

19 Q. Does that appeal to adolescents?

20 MR. SHELLEY: Objection. Outside the
21 scope. Lack of foundation, expertise.

22 A. I don't know. I haven't asked any
23 adolescents if it appeals to them or not.

24 Q. The cowboy depiction on billboards,
25 was that used when you were an adolescent?

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1 A. It may have. I don't remember. I
2 really didn't pay a lot of attention.

3 Q. Do you agree that the tobacco industry
4 has to replace -- if it's going to remain a
5 tobacco industry, has to replace dying and
6 quitting smokers with young smokers?

7 MR. SHELLEY: Objection.

8 Argumentative. Lacks expertise. It's far
9 beyond the scope for which this witness was
10 proffered.

11 BY MR. HOAG:

12 Q. You can answer.

13 A. I don't believe that I can render any
14 sort of expert opinion about that.

15 Q. What's your understanding of the
16 purpose of your testimony today?

17 A. Well, the purpose of my testimony is
18 to answer questions that you raise. My
19 understanding is that it's part of the discovery
20 process.

21 My understanding is that the Council
22 for Tobacco Research and the people here at
23 Bryan Cave have asked me if I would testify on
24 behalf of the Council for Tobacco Research in
25 some -- a few cases, including the Engle case

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1 and I agreed to, and this activity allows you to
2 get a feeling about what I am willing, what I am
3 going to testify about and to kind of limit the
4 areas in which I have expertise or do not.

5 Q. Have you reviewed any depositions in
6 the Engle case?

7 MR. SHELY: Can you defer to counsel on
8 that because he may not necessarily know.

9 MR. HOAG: To refresh his recollection,
10 sure.

11 MR. SHELY: Okay.

12 A. I can answer and then I can ask
13 counsel in what cases.

14 MR. SHELY: Okay.

15 A. Those depositions apply but I read the
16 overall deposition and the -- is it Shields?

17 MR. OTT: He looked at Susan Oparil's
18 deposition in the Texas Attorney General
19 case and he also looked at Oparil's expert
20 disclosure and Jim L. Shield's disclosure,
21 both in the Texas case.

22 BY MR. HOAG:

23 Q. Aside from reading the Shield's
24 disclosure, did you read any deposition of Mr.
25 Shields? I don't even know if there was one

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1 taken.

2 A. I haven't read a deposition of his.

3 Q. Did you read Susan Oparil's deposition
4 taken in the Texas AG case?

5 A. Right.

6 Q. Is that the only deposition you've
7 read?

8 A. Yes.

9 Q. And what was Susan Oparil's deposition
10 about?

11 A. It was about the Council for Tobacco
12 Research, again, I guess relating to, relating
13 to functions of the Council for Tobacco
14 Research, kinds of science that was funded by
15 the Council for Tobacco Research.

16 Q. Did you learn anything knew about the
17 Council for Tobacco Research that you didn't
18 know prior to the time you read it?

19 A. There may have -- to my recollection,
20 most of what was discussed in that deposition
21 related to information that was available to me
22 in the form of documents that I had the
23 opportunity to review.

24 So I don't know that there's anything
25 knew I encountered there. I don't recall.

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1 There is nothing that clearly stands out as
2 something new to me in looking at the Oparil
3 deposition. In fact, I kind of came away in
4 reinforcing my perspective about what was
5 involved in a deposition.

6 Q. Is it your understanding that your
7 deposition will be of assistance to the tobacco
8 industry?

9 A. I don't know that it will, so I don't
10 know that it will. I think the jury is out on
11 that.

12 Q. Is your purpose to provide testimony
13 that is of assistance to the tobacco industry?

14 A. No, but -- no.

15 Q. Have you read any books about the
16 tobacco industry?

17 A. No, I haven't.

18 Q. Have you ever heard of a book called
19 The Cigarette Papers?

20 A. No, I have not.

21 Q. Have you read any articles in the
22 Journal of the American Medical Association
23 concerning the tobacco industry?

24 A. From time to time I have, but the
25 journals of the AMA is one of the journals that

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1 I routinely review.

2 Q. Have you read any articles by Stanton
3. Glance?

4 A. Not to my recollection.

5 Q. Have you reviewed the Brown and
6 Williamson internal documents that are now in
7 the public domain and can be found, for example,
8 on the Internet?

9 A. No, I have not.

10 Q. Do you plan to?

11 A. I don't know that I will, because I'm
12 not sure that they relate to the functions of
13 the Council for Tobacco Research.

14 Q. You don't know whether they do or
15 don't relate to the functions for the Council of
16 Tobacco Research, is that correct?

17 A. That's right.

18 Q. Why do you not plan to look at the
19 documents to find out if they relate?

20 A. Well, if it's something that comes up,
21 then I certainly -- and that it would be
22 relevant to depositions or testimony, I
23 certainly would look at them, but it wasn't part
24 of my plan to look at them.

25 Q. Do you think those internal documents

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1 could be in any way relevant to your opinion
2 regarding the integrity of CTR?

3 MR. SHELY: Objection. Without having
4 seen them he cannot form an opinion.

5 A. It would be difficult to have an
6 opinion about that without having seen those
7 documents but, again, as I again perhaps
8 suggested earlier, there may -- if I may
9 speculate wildly ---

10 MR. SHELY: I don't want you to
11 speculate.

12 THE WITNESS: You don't want me to
13 speculate?

14 MR. SHELY: Just answer the question.

15 A. I don't know that they necessarily
16 would influence my opinion.

17 Q. So they might influence your opinion.
18 You just don't know?

19 MR. SHELY: Objection.

20 BY MR. HOAG:

21 Q. Correct?

22 A. Again, the internal documents have no
23 bearing, they may have relationships to
24 something that maybe it was intended or a wish
25 of someone, but as to whether they actually

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1 impacted any operations of the CTR, I see no
2 evidence that they did.

3 Q. Well, if you don't look at the
4 evidence you can't see the evidence, can you?

5 A. Well, again, I think much of my
6 evaluation about the scientific programs funded
7 by the Council for Tobacco Research relates to
8 the proof in the pudding, the publications and
9 how scientists will look back retrospectively at
10 the value of the science that was funded by
11 their organization.

12 Q. Does the fact that articles are
13 published in peer review journals indicate to
14 you that CTR was not influenced by the tobacco
15 industry?

16 MR. SHELBY: Objection. Lack of
17 foundation.

18 A. Again, I have no reason to believe
19 that the CTR was influenced by the tobacco
20 industry, and again, the proof is in the
21 pudding, and that CTR -- a lot of work has been
22 published through the CTR, and once the peer
23 review process and the scientific investigative
24 process is underway, I think that that process
25 operates independently.

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1 Q. Have you ever heard of a frank
2 statement to cigarette smokers?

3 A. Yes, I have.

4 Q. What is it?

5 A. I believe it was an advertisement
6 published by the tobacco industry in the
7 1950's.

8 Q. And what did it say?

9 MR. SHELLEY: Objection. You can't
10 answer that without it in front of him.

11 MR. HOAG: Well, he can if he can.

12 BY MR. HOAG:

13 Q. What did the frank statement say? What
14 do you recollect?

15 A. Well, I don't remember all the
16 details, but I think the general theme of it
17 concerned issues relating to tobacco use and
18 health, and there may have been a passage there
19 about formation of Council for Tobacco Research
20 and its previous incarnation as the Tobacco
21 Industry Research Council.

22 Q. Do you recall whether the frank
23 statement included the following language:

24 We accept an interest in people's
25 health as a basic responsibility paramount in

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1 every -- to every other consideration in our
2 business.

3 A. Well, without having the frank
4 statement in front of me, I can't verify that
5 but, if you're reading verbatim, then I'm sure
6 that's what's in the statement.

7 Q. In the frank statement, did the
8 tobacco industry promise to fund independent
9 research to find out whether or not tobacco
10 caused any disease?

11 MR. SHELBY: Let me object to that.
12 Promise is a legal term. He's not a
13 lawyer. He's not in a position to render
14 expert opinions about legal issues.

15 BY MR. HOAG:

16 Q. You can answer.

17 A. I do recall again that there would be
18 formations of the TIRC, Tobacco Industry
19 Research Council, and that they would
20 investigate issues related to tobacco health and
21 disease.

22 Q. And do you recall in the frank
23 statement they said there wasn't -- at that time
24 when it was printed in 1954, there wasn't
25 sufficient evidence to prove that cigarette

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1 smoking caused any disease?

2 A. If -- I think there's something like
3 that and if, in fact, you're quoting the frank
4 statement directly, then I'm certain that's what
5 it said.

6 Q. And you're aware that the research
7 area that you're most interested in -- well, let
8 me withdraw that question.

9 The research that you have done that
10 has been funded by CTR has not been concerned
11 with tobacco smoking and health, correct?

12 A. It hasn't -- no, I haven't used
13 tobacco smoke at all as a variable in my
14 experiment.

15 As I mentioned before, our research
16 isn't principally concerned with health issues,
17 but we are studying basic phenomena, principally
18 targets in the brain and body for nicotine.

19 MR. HOAG: I have no other questions.

20 MR. SHELY: We'll read and sign.

21 (Thereupon, the taking of the
22 deposition was concluded at 4:00 p.m.)
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25

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Sworn to and subscribed before me this
_____ day of _____, 1997.

My Commission Expires:

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CERTIFICATE

STATE OF FLORIDA)

COUNTY OF DADE)

I, DONNA L. GUNION, a Notary Public in and for the State of Florida at Large, do hereby certify that, pursuant to a Notice of Taking Deposition in the above-entitled cause, RONALD LUKAS was by me first duly cautioned and sworn to testify the whole truth through Kathy Stine, Notary Public, and upon being carefully examined testified as is hereinabove shown, and the testimony of said witness was reduced to typewriting under my personal supervision and that the said deposition constitutes a true record of the testimony given by the witness.

I further certify that the said deposition was taken at the time and place specified hereinabove and that I am neither of counsel nor solicitor to either of the parties in said suit nor interested in the event of the cause.

WITNESS my hand and official seal in the City of Miami, County of Dade, State of Florida, this 19th day of August, 1997.

Donna L. Gunion

DONNA L. GUNION
Notary Public, State of Florida at Large;
My commission expires July 30, 2001.



Donna L. Gunion
MY COMMISSION
BONDED THRU TROY FAIR INSURANCE, INC.



Donna L. Gunion
MY COMMISSION # CC648142 EXPIRES
July 30, 2001
BONDED THRU TROY FAIR INSURANCE, INC.

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